The Builder.

VOL. XXXIII. No. 1663. SATURDAY, JULY 17, 1875.

ILLUSTRATIONS.

Metropolitan Convalescent Institution: Home for Children, at Norbiton (Plans, 643, 644) 644

The Holloway Sanatorium, Virginia Water, Windsor (Plan, 647).—Mr. Crossland, Architect 645

CONTENTS.

The National Training School and our Manufacturers 633
Peasant Farming and Peasant Gardening 638
Long Melford and Lavenham Churches 635
Matters in Cambridge 636
The Amended Rivers Pollution Bill 637
The Drainage of Madras 637
The Derbyshire Institute of Engineers 638
The Late Mr. J. R. Dove 638
Taunton and the Royal Agricultural Society 638
Ancient Measurements 638
New Water Supply for Lewes 638
Henri Labrouste, Architect 639
Dwellings of Workpeople in Pennsylvania 639
The History of Paper-hangings 640
Mr. E. W. Taylor, R.C., of Constantinople 641
A Village Home for Girls 641
Viaduct Buildings, near Charterhouse-street 641
The National Portrait Gallery 642
The Proposed New Liverpool Water Supply 642
Premiums awarded by Institution of Civil Engineers 642
Pictures Bought for the Art-Union of London 642
Insufficency of Provincial Post-offices 642
More New Buildings on the Dulwich College Estate 642
Structural Dangers 643
Metropolitan Convalescent Institution: Home for Children, at Norbiton 643
The Holloway Sanatorium, Virginia Water 643
Annual General Meeting of the Manchester Society of Architects 648
"Subordinate to the Architecture" 648
Suggested Amalgamation of the Institute and the Association 648
Trade Disputes 649
Improvement of Waste Lands 649
The Duomo of Florence 649
The Patent Laws 649
Bridge Building in America 649
How Churches are made Remunerative in America 649
The India Museum 649
Right of Workmen to Summary Judgment for Wages on a Bankrupt's Estate 650
Builders and Auctioneers: Badcock v. Brooks 650
"Grinding" Time 650
London School Board 650
School Board Schools 650
Church-Building News 650
The Plans for the New County Hospital, Lincoln 651
Testimonial to Mr. and Mrs. S. C. Hall 651
Action against a Halifax Concrete Builder 651
Charge against a Sewer Contractor 651
Stained Glass 651
Dissenting Church-Building News 651
Miscellanea 652

The National Training Schools and our Manufacturers.

THE important duty of selecting a head-master for the National Art Training Schools at South Kensington now devolves upon the Privy Council, as the late Mr. Richard Burchett, who has held the office since the year 1852, is dead.

All who knew Mr. Burchett must have respected him, both as a gentleman and an artist; and his dignified bearing and genial manners caused the students of the schools of which he was the head to regard him as a friend as well as a master; while the tutorial staff worked in the most perfect harmony with their chief, owing to the kind and brotherly treatment that they always received at his hands.

While full of regret at the loss of this gentleman, and while appreciating the merits of his teaching and the good work which he has done, it will not be considered as disrespectful to the memory of one who has left us if we say, that during the later years of Mr. Burchett's life the instruction at the South Kensington Schools has fallen short of what it might have been.

It is nearly forty years back that schools of design were established in England; but all who are acquainted with their history know that they were not valued till the year 1851. Prior to this time they existed only by sufferance.

To the Prince Consort England owes more than it is easy to understand. It was this prince who proposed and brought to completion the International Exhibition of 1851, and it was this Exhibition which enabled us to perceive that we were almost without knowledge of even the rudimentary principles of decorative art, while we were yet applying patterns to much of the produce of our vast manufactories.

This first of International Exhibitions has resulted in such an advancement in taste in England as could not even have been hoped for, and to the Prince Consort we are largely indebted for the present improved state of things.

The Exhibition of 1851 had revealed our ignorance of ornamental, or decorative, art, and Mr. Redgrave's excellent Report on Design tended much to point taste in a desirable direction.

Shortly after this first Exhibition a few leading manufacturers produced works, which, even if now regarded as poor in design, were then in advance of the taste of the day; but, unfortunately, few objects of superior pattern sold in such quantities as to render their production remunerative to their producers. The discouragement experienced by these pioneers of progress led to the belief that, in order to the appreciation of art objects, the public must be to an extent instructed in drawing. And it is a curious fact, that in learning to draw we learn also to see. What we see we may appreciate, while what we fail to perceive we cannot value.

The year 1853, if we remember rightly, saw a great extension in the duties imposed upon the old Schools of Design; for while the former institutions had only to educate designers, the new institution (now called the Department of Practical Art) was at the same time to instruct ornamentists, and educate all who would receive the proffered instruction in the art of drawing.

To the State it would be an advantage if every man could draw, for thereby power over the hand, and power of perceiving delicacies of form, are increased; but when the Department of Practical Art was established, under the advice of the Prince Consort, it was never intended that the art schools of London, and in the manufacturing towns, should cease to serve the manufactures, and raise the market value of our productions.

Engrossed with the idea of spreading a knowledge of drawing broadcast through the country, design and the study of decorative art, as applicable to the decoration of our domestic utensils, have been more or less neglected, and that this shortcoming of the Kensington schools has given dissatisfaction to a large class of manufacturers, and has caused them to begrudge the large annual grant which is voted to them by Parliament, is not to be disguised.

Perhaps we have erred more or less ever since the Department of Practical Art was instituted, in making even the central school (which is now at Kensington), and the large schools in the great manufacturing towns, too fully drawing-schools and too little schools of design; and this is certain, that the staff of masters at South Kensington consist of gentlemen who are masters of pictorial art rather than of ornamentation.

It is curious that, ever since the foundation of the first school of design, no great ornamentist has been connected with these schools as a professor or teacher; and even the art adviser to the Privy Council is a Royal Academician. Pugin never taught the art which led him to produce his beautiful ornaments within the walls of Somerset House or the South Kensington schools, and Owen Jones only explained, in five brief hours, at Marlborough House, the laws which led to his achievements in polychromatic harmony. Ornamentists, who are scholars having knowledge of the history and principles of ornamentation, and who at the same time are lovers of pattern-drawing, are not a numerous class; yet men are obviously wanted at South Kensington who can instruct youths in the principles of ornament and in the practice of design,—men who are acquainted with the requirements of the various markets in which our goods compete for sale, and who understand the technicalities of our various art-manufactures. Men having such knowledge, and being at the same time ornamentists in the higher and more scholarly meaning of the term, are those now required at South Kensington, if our art-manufactures are to continue that progress in which they have to a certain extent advanced.

The teaching of drawing will have to be fostered by the State for many years to come, and the head drawing-school may fitly find its home at South Kensington. The present excellent staff may still be retained with advantage as masters in the head drawing-school; but, now that a fitting opportunity presents itself, we ask that the desirability of forming a high school of decorative art, and of practical design, at South Kensington, in conjunction with the present drawing-school, be carefully considered, and that a staff of professors who are ornamentists in heart and in practice, and who are skilled and successful designers, be secured to instruct in the higher principles and knowledge of decoration those who may desire to aid our manufacturers in lending beauty to their productions.

PEASANT FARMING AND PEASANT GARDENING.

THE subject of what is called peasant farming has of late not only received a due share of attention, but has been treated as a subject of controversy. It is hardly needful, from our point of view, to dispute much on the matter, or to seek the aid of statistics to defend either the *pro* or the *con*. All that is needful, so far as we can make out, is to form a definite conception of what is intended, what is hoped for, and what are the natural limits of the case; and, it seems to us, if a clear and definite view of the matter be once fairly grasped, while we may feel that it is difficult to do that which is best, both for the peasant, as a class or as an individual, and for the country, of the population of which the peasantry forms an important element, there can be but little doubt of that at which we ought to aim.

The matter is complicated by the mixing up of two or three distinct issues. If they be separated from one another, and examined one by one, the haze will clear away from the landscape. Thus it is possible that that which is most conducive to the welfare of the peasantry, may not be equally advantageous to the nation. We do not assume,—far from it,—that such is the case; but it is a point for examination. Again, the welfare of the peasant is a subject which has a different meaning, as the term is used by writers of different schools. With some, the word is synonymous with wealth. It is so, if judged by the straightest sect of political economists. To those people who consider that the chief end of man is to buy in the cheapest market and to sell in the dearest; that is to say, that the *summum bonum* is to "make money," this definition is quite acceptable. To others, among whom we are not ashamed to rank ourselves, welfare means much more. It means the fullest and best proportioned development, both of mind and of body, suitable to the circumstances of the age, and to the mode of occupation in which the life of the individual is to be spent. It may so happen,—we believe it often does so happen,—that the purely economical advantage is one of the smallest that should be regarded in any just and large estimate of such a condition.

Nor must we close our eyes to the fact that great changes in habit, or in the condition and surroundings of any class, when they are not isolated, violent, and sudden, but wide-spread in their occurrence, and apparently spontaneous in their growth, are for the most part the accidents or outgrowth of that gradual revolution, in the relation which man bears to the planet on which he dwells, which has made such vast progress since the application of heat as a motive power. We may watch this revolution with more or less appreciation of its portentous nature. We may regard it, as our sentiments prompt us, with dread or with hope. But we must acknowledge our utter inability to arrest, or materially to divert, its course. It can no more be controlled by man than can the courses of the planets. True, even these at times appear to our eyes, and are spoken of by our lips, as retrograde. But the word only implies, in actual fact, that we are moving as well as they.

Thus, when we look back,—it may be with regret, it may even be with a feeling akin to anger,—to the state of things when it was within the province of the law-giver to decide on how small an area of land a house might be built, and how few acres, at the least, of arable and garden ground should be attached to every cottage, we must be conscious that these rules were only possible in a state of things different from that now around us. So long as man, with the aid only of the horse, the bullock, and the ass, had to supply the motive power requisite for the culture of the ground, for the winning of metals and minerals from beneath it, and for all those processes of fabrication and manufacture for which the fickle and uncertain power of the hand-mill, or the strictly localised power of the water-mill, were in appliance; so long as this was the case, a certain sparseness of distribution of mankind over the face of the earth was a natural condition. It was, in many respects, perhaps on the general balance of all considerations, a condition better than that which now exists. But it was a condition based on different facts. So soon as the employment of mechanical motor power became possible, a far-seeing eye might have detected the coming extinction of the ancient rural peasantry. On the one hand, the need of human fingers to act as a sort of slaves to powerful machinery, which might be multiplied to any amount, and driven night and day, as a veritable coining-mill for its owners, gave birth to the great towns. With every improvement in the steam engine, and in machinery driven by steam, the tendency to agglomerate human beings became more irresistible. Thus sprang up, street after street, those rows of houses, containing the smallest rooms, consisting of the thinnest walls, surrounded by the least possible area of breathing space, yard, or even roadway, and supplied with the very scantiest appliances for health, for decency, much more for elegance and education by the eye, in which it was possible for the spirit of economy to drive human beings to dwell. Who can visit certain localities in Liverpool, Birmingham, Oldham,—how many great centres of production may we not add,—without a deep sense of depression and of disheartenment at seeing how man has housed himself?

While the power of the steam engine, fixed on the soil, to attract around it a dense and cheaply housed population, was gradually attaining more and more development, a second impulse was given to the agglomerative tendency, by the application of steam to locomotion. Thus the glut, which would by degrees have limited the growth of manufacturing centres, was averted. Transport was provided of a kind competent to remove any accumulated products as rapidly as they could be produced. A second, and a very appreciable stimulus to the growth of our towns was thus supplied.

But still the demands of agriculture seemed to promise that, in rural districts at least, a certain proportion of inhabitants to area would be maintained. The average labour annually applied, per acre, to the soil, was a stable quantity, or a quantity only very slowly altered by the devotion of more skill and care to agriculture. At the present moment this feature is vanishing from the scene. By one of those extraordinary coincidences, which are far beyond the power of the statesman to control, or, it may be, fully to comprehend, we see at the same moment the science of the engineer supplying labour-saving machines to the agriculturist, and the changed attitude of the labouring classes giving the farmer every inducement to have recourse to machinery. The great necessity of having, in a village or hamlet, a resident population, of numbers sufficient to save the harvest, in the brief time during which our climate allows of this object being effected, is now either obviated, or in course of being swept away. Thus while the steam-mill and the locomotive tend to attract masses into our towns, the steam plough, steam reaper, steam elevator, and a hundred other agricultural labour-saving machines, tend to diminish the numbers of our villagers.

Disproportion to, then, as the numbers of the rural and the urban population actually are, it is hardly possible to take a dispassionate glance at the future without thinking that this disproportion is likely steadily to increase. The causes which tend to mass population together are active and unchecked. Each hundred souls that are added to a town population demand so many new builders, butchers, bakers, doctors—in proportion. Increase tends to exaggerate itself. On the other hand, there are reasons apparent why, in many places, the rural population would remain stationary, or even actually decrease. And the decrease will have a similar tendency to exaggerate itself.

Nor is there any economical reason to oppose to this evident tendency of the age. Economic reasons, no doubt, to a great extent underlie the actual phenomena. And with regard to the particular subject of our inquiry, the distribution of cultivation over the soil, economy is altogether,—with one important exception,—in favour of the concentration of land in the occupation of large farmers. For the costly machinery which is now so rapidly being turned out by our smiths and engineers, in all parts of the country, is inapplicable to any but large farms. Not only is it a question of capital, but a question of process. Not only is it only a large farmer who can afford the best, and therefore the most economical, machinery, but he finds that it can be most advantageously applied to large fields. The cost and loss of time of moving and fixing the engines bear so great a proportion to those of the actual work done, that small fields will disappear before steam cultivation. Thus the actual cost of cultivating a farm of twenty acres, will be very much higher, per acre, than that of a farm of 2,000 acres. And not only is this true as to cost, but it is no less true with reference to that feature of steam cultivation which is even more valuable than its comparative cheapness, namely, the great rapidity with which the crops can be cleared at the exact time of maturity, and with which the land can be prepared for the reception of fresh seed.

Against all the economical advantages of the large farmer, there has to be set one important advantage possessed, and often fully brought into play, by the small one. That is, that he is apt to make his little holding a sort of savings-bank for labour that would be otherwise entirely lost. The producing power of the peasant farmer is stimulated by the sense of property, and by the interest which he takes in his holding. Time that would otherwise be spent in listless idleness, or, worse, at the public-house, is devoted, many a time and oft, to the loving culture of the garden. And thus it is that, while the spade cannot compete with the steam plough, as applied over a large area of land, spade husbandry has a rich harvest of its own; in which the comparative imperfection of the tool is more than compensated by the extra amount of labour which is called forth by the sense of ownership.

This serves to point to the fact, that a broad line is to be drawn between the field and the garden. For the spare labour of a man to be fully effective it must be applied to a limited area of land. The garden is, therefore, its proper locality. Whether we refer to the cultivation of culinary vegetables, to that of flowers, or, when favourable aspects are obtained, to that of standard, espalier, or wall fruits, the great question of scale must be kept in mind. We have a new spring of labour to apply,—that labour to which a man voluntarily devotes a portion of the time which is not occupied in his contract with his master. This amount is limited, and not only limited in amount, but, if wisdom rule, limited in the scope of its application. Thus if the united spare time and voluntary labour of twenty peasants were devoted to the cultivation in common of one arable field, there would be an economic waste. It is true that labour, otherwise unexerted, would be created; but if this labour is applied to an object that could more readily be effected by machinery, while we have a gain on the one hand, we have a loss on the other. Labour is created, but labour is misapplied. But to the garden, the labour-saving machinery is inapplicable. The earliest human toil cannot yet be performed by the "drudging goblin" of the steam-engine. If therefore, we not only encourage man to work, rather than to drink, but teach him how to apply that extra work to the most suitable end, we have undiminished gain, both to the peasant and to the country.

It thus seems to us to be undeniable that the gradual displacement of peasant farming, and of the cultivation of small farms, by the extension of those larger farms, consisting of very large fields, to which machinery can be with the greatest advantage applied, is one of the unavoidable consequences of the mechanical improvements of the age. If such be the case, it is, of course, idle to swim against the tide. The good results, which have undoubtedly been observed in some cases of peasant farming, may be traceable to two causes, neither of which can control, although they may occasionally modify, a tendency that has all the force of a natural law. These causes are, first and foremost, the fact that peasant farming tends, under certain circumstances, to the creation of labour, which is a positive gain to the country. The man works instead of being idle, and here is a fountain of wealth. In the second place, there are portions of soil which, either from their broken and rocky character, or from their small area and confined locality, are unsuitable for the broad sweep of mechanical agriculture. The application of hand labour to these plots is a direct economical advantage to the country. The creation of labour before noted is an advantage, but one that is diminished in value by the misapplication of the labour created. If the united extra labour of a village till a field which could be readily added to a large farm, that extra labour is applied at a loss. It produces a good result, but it does so in a wasteful manner. But if that newly-created labour be applied to land that would otherwise be uncultivated, we have a double gain. The land yields her increase, instead of lying idle; and the labour of the peasants does the same.

The simple outcome of the above line of inquiry is this: Peasant farming, when society has attained a certain stage of development, is, economically speaking, a mistake, and will prove, if artifically encouraged, a failure. Peasant gardening, on the other hand, is a double source of national gain, if wisely carried on. We now speak of these things as regarded from the economical point of view alone.

This, however, we think it cannot be too distinctly borne in mind, is the narrowest, lowest, most ignoble, and, therefore, most questionable point of view. We must regard, not the mere mechanical power of men to produce food, or to dig gold, or to add to the already enormous amount of the stored-up wealth of the country; but the direction of the national energy to raise the moral and physical welfare of its inhabitants, as well as to add to the physical comforts of the easy and well-to-do classes. It is for this reason, it seems to us, that it is chiefly important to understand the positive economical elements of any question like that which we are discussing. Good men, wise men, and all men who merit the title of statesmen, think and toil to introduce measures that may elevate the general condition of their countrymen. What is most important is, that this great and noble effort should not be wasted. This power,—the power of the helping hand of charity, in fact,—should be applied in obedience to economic law, and not in the teeth of economic law. Here we have the happiest possible illustration of that canon. If a certain amount of time and money be forthcoming, in order to raise the condition of the peasant, by calling forth his inert and unused power of cultivation, it will be wasted if applied to the farm, it will be productive in a high degree if applied to the garden.

Something, however, more than either the will or the opportunity is necessary for these good efforts to bear fruit. It is not enough to reply, "I go, sir," to the injunction, "go and work to-day in the garden." The will may need only the gentle stimulus of occasion to set the strong arm to work. The occasion may be very readily afforded. Plots and patches of neglected land are to be found almost everywhere,—in the outskirts of towns, in the purlieus of villages, on the unused sides of the highways. But little cost, and not so very much effort, are necessary, in numerous cases, to supply the peasant with garden ground. But far more rare and difficult to meet are the knowledge and skill, on the

part of the peasant, to till the plot so provided. If Dogberry be in error in thinking that "reading and writing comes by nature," no less is this theory inapplicable to digging, and hoeing, and planting. To how many of us do these things come as if instinctively? To those, and those alone, who, surrounded from their happy youth by gardens and orchards, have learned something of the craft of the gardener by the unconscious tuition of early habit. To such people it is very natural to think that you have only to give a man, who has a few spare hours at his disposal, a bit of ground and a spade, and straightway he will make it blossom forth in wealth or in beauty.

Very far is this from being the case. We have to create two elements, before we can apply self-sprung labour to wisely economised or redeemed land. We have to create taste. We have to impart skill. The peasant must have the wish to garden, and he must be taught how to do it. The two, happily, go readily together. To those better and happier individuals of this class in whom the spirit of Poetry has inspired a native love of flowers, knowledge of their culture will come, almost imperceptibly, so soon as the means of gratifying the wholesome taste are placed within reach. The same may be said with regard to fruit and culinary vegetables. But these are the rare exceptions. In how many villages and towns do we see the neglected squalor of nooks and corners of land that might so easily be bright with beauty? How much more frequently do we see horticulture carried out under difficulties, the blooming cottage garden of three yards square, the box of mignonette in the window, the little window itself blinded by a carefully-tended rose, or a pot of snowball geranium; than we see anything like a systematic utilisation of all the ground available for gardens.

If one strolls from village to village in the remoter districts of the country, nothing is more striking than the contrast afforded by the cottage gardens. In one place Flora seems to have made her home. Every patch of ground is tended; bright with flowers, green with mown lawn, or affording a goodly promise of hedgerows of peas and beans. No window is without its climbers. Dense sheets of ivy clothe the walls, and keep the rooms within both dry and warm; and here and there will be seen not only a beautiful flower—all flowers are beautiful—but a new one. How much care, and even cost, has gone to the production of the pride of some of these cottage gardeners? The yellow Austrian briar is a matter rather of ancient heritage than of purchase; but what shall we say to the deep rich petals of the "Duke of Edinburgh," or like roses of new production and Royal or noble name! It is incredible how soon a fashionable flower will be carried by the birds to the remotest hamlet, so only there be a cottager with a passionate love of the beauties of the garden.

Go into the next village. Pick your way, and put your kerchief to your nose as you pace the heap that denotes its boundary; the heap of brickbats, stones, broken slates, utterly useless potsherds, and worse refuse; diversified by a worn-out shoe or hat, and perchance by the remains of a hunted cat or dog, and backed by a dense growth of nettles, showing what Nature would do if gently solicited. This unsavoury altar to the Terminus of the place characterises the entire village. If foul puddles be absent, if drainage has been introduced by the strong hand, still the power of listless idleness, and the utter absence of the least glimpse of order or of beauty, mark the entire group of tenements. Poverty is made more repulsive by being exhibited in its most cynical phase. The only vegetable products thought of in that village, beyond the ordinary crops which it is a daily and grudging toil in some way to tend, are the potato and the tobacco plant.

Where does the cause of the difference lie? We can answer the question with regard to some instances. We strongly suspect that the same answer would apply to the great majority. Where the squire is no longer to be found, it is the doing of the clergyman, or of the clergyman's wife. A bright, trim, well-tended garden, in the manse or the hall; a tasteful, graceful, truly feminine love and care of the flowers, as well as of the fruit; the gift, at odd times, of spare plants, of slips, or of seed; example, and good example; tend to beautify a village by a happy contagion. So, on the contrary, the man who looks at his book alone for his lessons, and has no eyes to see the clearer and holier, as well as the more ancient, lessons that are inscribed on every form of organic life,—the man who, with another world on his lips, takes no heed of what is most beautiful in this,—the man who remembers nothing of the first garden but the serpent and the apple,—is not one who understands his mission to his countrymen, or whose parish will return him an odour of flowers which is no other than an odour of the sanctity of Nature.

LONG MELFORD AND LAVENHAM CHURCHES.

THE Council of the Institute of Architects have more than once included the above-named churches, the most conspicuous among the "late" parish churches of Suffolk, among the subjects suggested for illustration in competition for their "silver medal and five guineas" prize, annually given for the best set of drawings illustrative of existing buildings unpublished, or only inadequately illustrated hitherto. As, in spite of the reputation which Lavenham at least has long had as a fine example of Perpendicular architecture, these two churches seem to be neglected by sketching and measuring architects (partly perhaps on account of the contempt in which the late period of the style is held at present), a note or two on a passing visit may revive interest in them a little, and lead to a response to the Institute invitation this year for drawings of one or other of them.

As Lincolnshire is noted for its churches of the "Decorated" period, so is Suffolk for those of late Perpendicular works, some of them of very large size. Bury St. Edmunds, which divides the honour of principal "county town" with Ipswich, possesses its two specimens, in very late style and in very effective contiguity in the centre of the town; these two churches being, however, more remarkable for the perspective of their long and lofty nave arcades, poised on very slight piers, than for anything in the detail, which in both cases is of that shallow and nerveless order characteristic of the decadence of the closing period of English Gothic. It is worth while, however, for any architectural student to see with his own eyes so fine a bit of fourteenth-century work as the Abbey Gateway, not to speak of the Norman tower, and the bridge over the small river at the end of the long piece of the old Abbey wall (fourteenth-century also) which remains, skirting the route out of the town towards the north-east. Much as the antiquities of the place have been talked of, and illustrated by engravings (rather artistically than architecturally), many members of the profession are hardly acquainted with them; a fact which may be partly accounted for by the consideration that Bury is on the Eastern Counties Railway. However, to return to our immediate subject, any one who finds himself in Bury St. Edmunds, and has had enough of the railways of the district (and a little of them goes a long way), will find the drive to Melford (thirteen miles or so) a very pleasant one in fine weather, through country not without much beauty, in a quiet way; for Suffolk scenery, hereabouts at least, is not exciting, but the country is rich in fine foliage, and in that sort of picturesqueness which is peculiarly and unmistakably English. But the place itself will repay any dissatisfaction that might be felt with the route to it. "Long Melford," which is the full name of the place (we do not remember to have heard if there is a *short* Melford anywhere about), might be called a model English village of the rural type,—at least as to general site and aspect. The village architecture, it must be admitted, is not of the most interesting type; the rural villa, with white paint over it, being too much developed, though there are better things here and there. But the general effect is hardly spoiled by this. "Upon an hill most pleasant for air and aspect" (as an old manuscript has it) "there standeth a large and beautiful church called Trinity Church"; and looking down from the churchyard we see a long irregularly-shaped gently-sloping lawn, bordered on the one side by cottages and the villas aforesaid, on the other by masses of trees overhanging a park wall half hidden in foliage, and terminating in one of the most picturesque of red brick gatehouses, in a style between Tudor and Elizabethan; a clump of fine trees at the bottom of the green half bounds the view, and half seems to give perspective to the village street seen across the bridge beyond; in summer weather, and with the trees in full foliage, the effect is something delightful to those who have been "in populous cities pent."

The church tower,—a piece of villainous "compo" Classic, erected in the first half of the eighteenth century,—an oblong mass set up on end, and with an urn at each corner, is a damper to the prospect certainly. The church itself is singularly complete in design, and presents a long unbroken line of windows in aisle and clearstory, with a battlemented parapet above the latter; and adjoining the east end, but with a marked break in the line of building, the large and unusual lady chapel which gives the chief interest to the church. The high-pitched external tiled roof of this is a break in the uniformity of the design, and looks like a subsequent addition or alteration for the better protection of the building, which as seen from inside is roofed, or rather we may say ceiled, with a very flat-pitched roof of the characteristic style of the period, and of excellent design and execution. Externally a noteworthy feature is the flat arcading designed in flint and pebble work; or rather in broken and unbroken flints, the darker insertions being formed by the broken faces of the stone, amid the light grey tint of the unbroken pebbles. "Flint rubble and stone dressings" would in fact be the "specification" description of the work here and in other churches of the neighbourhood, which show a remarkable aptitude for dealing effectively with materials plentiful on the spot. Internally the nave arcade, still with its coating of whitewash dating from the churchwarden period, shows better work in the arch mouldings and plan of the piers, than the aisles and clearstory give evidence of; almost creating an impression that the peculiarly "save-trouble" style of the last period of Perpendicular architecture had been adopted subsequently to the design of the arcade; for in the rapid movement of taste at the critical periods of Gothic an accidental retardation of a building for a very short time would lead to its being resumed with altered details; of this there are many instances. The design of the nave generally suggests the idea of an attempt to imitate Lavenham, when the genius of the style, at its height in that church, was fading. The rich oak roof, and the rood-screen, have been among the glories of Melford; the latter to be spoken of in the past tense except in regard to a section of the old screen which fills one bay on the south of the chancel, and has been well reproduced in continuation, as a screen for the south chapel, and for the organ-room in the corresponding position on the north. The church has been conspicuous, too, for its brasses, unfortunately much decayed, but of which sufficient remains are seen of one or two splendid canopied designs to indicate what they were when uninjured. Besides the lady chapel, with its ample ambulatory round all four sides, the Clopton Chapel, north of the chancel, presents most delicate and beautiful work in the canopies of its twelve small niches, all varying in design, and in wonderful preservation, considering the delicacy of the work. There has been much colour decoration here, remnants of which are traceable, and elaborate inscriptions on the ceiling and over the beams, at present in a confused state of decay and partial obliteration. Restoration has not touched the interior of Melford, except in regard to re-seating and the screen before mentioned. What is desirable is the scraping off of the whitewash, and the removal of the unsightly and incongruous Classical reredos; and it would be an interesting experiment to restore the decoration of the small north chapel referred to, for which probably a critical inspection would give sufficient data. Externally there is nothing to be done, fortunately,—for this grouted flint masonry stands wonderfully, and keeps the worked stone well in its place also,—unless it be to remove altogether the inexcusably unsightly tower: it would not be worth while, however, to rebuild it, when all trace of the original has departed. The internal tower arch was entirely built up when this precious erection was made, and was in recent years restored in conformity with the height and general design of the nave arches; but the octagonal caps at the impost, by an absurd caprice, have been worked with hollow faces showing a concave curve on plan, in an un-Gothic manner directly contradicted by the caps of the nave arcade. Another peculiarity of Melford is the absence of a chancel arch, and the continuation of the nave arcade design right up to the east wall of the main church, an effect interesting from its peculiarity, though hardly to be imitated. The remains of the old stained glass, collected from different parts of the clearstory, into windows at the east and west ends, offer bits of the greatest interest

and beauty in colour and design; their deficiencies are supplied by bits of modern glass, some serviceable enough for the purpose, some of it actually impudent in its incongruity and raw colour, especially the heads of the windows at the west end of the aisles; it is incomprehensible that any one could put in such tawdriness with the other glass before his eyes. The church contains a really good and artistic Classical monument to Sir W. Cordell, at present standing in a most awkward and unsuitable position to the south of the Communion, where it was apparently placed as in opposition to the Gothic recessed monument occupying the usual position of "founder's tomb," on the north side: as the Classic monument of course is not a recessed one, the appearance is most incongruous. With this monument removed into the south chapel, the present reredos (which has no merit of any kind), replaced by something in keeping with the rest of the church, and the bits of modern stained glass in the "restaurant" style taken out of the old windows, and replaced with something more in keeping, there would be nothing in the interior of Melford to interfere with the unity of its effect, unless it be the new windows. A somewhat violent one by Wailes already asserts itself near the south doorway; not, we hope, to be followed up by others in the same style. In such a church, with its two series of large windows in aisle and clearstory, there would be a fine field for the display of quiet and delicate effect in stained glass, of which examples are before us in the old glass which modern designers seem so unwilling even to attempt to imitate in its really fine qualities, its delicacy and reticence of colour, though they are quite ready to reproduce the characteristic defects of the period, in the archaic and distorted drawing of the figures.

A drive of three or four miles, in the return direction, brings us to Lavenham, which may be termed the "King's College Chapel" of parish churches; the finest and most complete specimen, in this class of building, of the Perpendicular style at its height, and before the first hint of decay had supervened. The flat decoration in flint work is repeated to some extent here, but Lavenham depends for its external effect more upon its profusion of fine stone carving, showing a breadth and fulness of manner very unusual in the work of this date. The small carved panels which occur in the remarkable open-work parapet have in style of execution more the character of the best fourteenth-century work than of the later date to which they really belong. The splendid masonry of the tower, entirely of large broken flints with the broken face outward (except, of course, the angles and window-dressings in worked stone) shows what can be done in this sort of ready-to-hand material, and what durable work it is, too. Lavenham tower is likely to out-last many a tower built of carefully-hewn stone. The crowning angle pinnacles are wanting, and have probably been removed, for it is difficult to suppose that the builders who had completed everything else in a manner so regardless of labour and cost should have stopped short in crowning the edifice, unless they could not make up their minds as to the design of these features. The large and bold band of panel-carving traversing most of the exterior near the base course of the Tower is a notable feature in the external design, with every panel differently treated; for the diversity in detail is remarkable at Lavenham, considering its period. Every one of the roof-principals is varied in the design of its ornamental carving. The piers are of a remarkably effective plan, and as the whitewash has been removed here, the effect is proportionally increased in comparison with Melford, which, however, can lay claim to no competition at all with Lavenham in regard to detail, however it may rival the latter in general interest and design. The treatment of the interior walls above the nave arcade shows a richness and completeness of design rarely found in this position in a parish church. Some remarkably fine oak screen work, especially the pew anciently belonging to the Spring family, against the north wall of the church, is worth special attention. Stained glass, what there is, is mostly recent, and, on the whole, not fortunate. The east window presents florid and pinky combinations of colour depressing to the mind; and the window by Messrs. Lavers & Barraud, at the east end of the south aisle, with better colour, presents the dire mistake of a perspective scene with background, &c., and is otherwise vulgar in design. Considering the unmistakable manner in which nearly all who can claim to speak with any authority on matters of æsthetic correctness have joined in condemning the transformation of windows into "pictures," it is really surprising to find "firms" which have considerable artistic ability at their service persisting in a method of treating stained-glass design, which, even if it were not a complete mistake in itself, is, at any rate, totally opposed to the spirit of Mediæval art, and therefore à *fortiori* out of place in a Mediæval church. However, there is little prospect of improvement in stained-glass treatment until the donors who generally give these things, and the congregations or clergy who receive them, learn a little more about the matter, and are not content to accept with unquestioning faith the taste of the firm employed. *Au reste*, Lavenham has been too long reputed as a fine example of the style to need further or more detailed recommendation now; but the fact that no architect has done for it what has been done for the finest earlier parish churches of England seems to indicate an insufficient practical recognition of its remarkable excellence; and as the Institute are asking, as above mentioned, for illustrations of this among other buildings for their silver medal, we recall attention to it at this juncture as a unique specimen of the Perpendicular style in its best phase, which may very well claim special attention from any younger members of the profession who have time and inclination for such work.

There are other smaller churches accessible from Bury St. Edmunds, not much known in "Gothic manuals," but presenting no little interest in regard to picturesque outline and general style, in combination with natural advantages of site: Stowlangtoft is a charming example of the country church in the midst of its enclosure of ancestral trees, where even poor architecture would look effective; but the tower at least here is a very good bit of work; and at Pakenham a curious little cross church with a central octagon tower, with very abrupt broaches, forms a characteristic crowning point to a very picturesque village. There is plenty for the student of rural domestic architecture, too, in the neighbourhood: old cottages and farm-houses with that nameless picturesque charm which it seems impossible to reproduce, even when the attempt is made; which, it must be confessed, is not very often. Such an artist as Mr. Boyce might find materials for a dozen drawings during a morning's drive; and if he would pay Long Melford a visit, we should be pretty certain to come upon the Park Lodge there, some morning, "on the line" at the "Society of Water-Colours" Exhibition.

MATTERS IN CAMBRIDGE.

THE dining-hall at Pembroke College, about which, as our readers remember, much discussion has taken place, is out of the reach of discussion now. It is "clean gone for evermore," the walls of the new one are getting up, and the college "quad" generally is in a state of transformation. What has been done, is doing, and is about to be done, seems to be briefly this. The side of the quadrangle adjoining Trumpington-street has been already half rebuilt from the design of Mr. Waterhouse, in bright red brick, with stone quoins, strings, and mullions; the style being a modified domestic Gothic, with three-centred arches to the principal windows. The remainder of the Trumpington-street front, excepting the chapel (the end of which comes up to the street in the middle of this front, and at present divides the old work from the new), will probably be rebuilt before long in accordance with the design of the other half; this portion consists entirely of rooms, and in some places, over the gateway especially, is in a "state of disrepair" (as some American said about our cathedrals), which renders rebuilding really practically desirable. The return of the quadrangle at the further end, flanking Pembroke-street, may not improbably follow the fate of the front, though the practical reasons for demolishing it are not so obvious here as in the front, the buildings having the appearance, at least, of better repair. Projecting into the quadrangle from the centre of the Pembroke-street range of building, and parallel with Trumpington-street, comes the new dining-hall, on the site, or nearly so, of the old one. Back from the end of this, parallel to Pembroke-street, runs the only range of buildings which it seems certain will be preserved; a range of old brick "rooms," with a quiet picturesqueness in their aspect which makes it matter for congratulation that these, at least, are reputed to be safe from demolition. Opposite to these, on the other side of the green furthest from Pembroke-street, the new library is to be built, forming another side, or part of another side, of the quadrangle. The ends of the library and of the old buildings just mentioned abut on the master's garden, behind the quadrangle, and are separated from it by a brick wall (new), showing some picturesque treatment of brick gate-piers. The master's house, the back of which adjoins Pembroke-street, is just completed from Mr. Waterhouse's design, in a similar style to that of the new buildings in Trumpington-street; so that the intention to make one thing of it is pretty obvious. Nor does it appear that this is an intention likely to meet with any serious opposition from among the governing body of the college, notwithstanding what has been said on the subject. The chapel remains as a fixed point in the midst of the changes going on around it. This has been a plain brick erection, an unbroken oblong with a low-pitched roof, subsequently "made beautiful" (though, as it should seem, "not for ever") with compo covering and pilasters and capitals. These it is possible to remove, and replace with a red brick outer surface similar to the other building, which will, if the whole scheme is completed, flank it on each side.

The work on the new building is being admirably and solidly done, and the character of the design shows that type which belongs to Mr. Waterhouse's more recent work, and for which there is much to be said, considering it as an adaptation of Gothic to the feeling and requirements of the present day. If we look at it in regard to this particular case, however, there may be room for question. The old buildings which are to remain should, one would suppose, give the key to the style and feeling of the new work; but this is certainly not so. The old buildings, it is true, have but little of what is generally called "architecture" in them, and one need not expect an architect, in rebuilding, to tie himself from going beyond these in elaboration. But there does seem to be, in the new buildings as so far proceeded with, too little consideration for the *genius loci*,—too much of the "handsome structure" element, in place of the quiet domestic look of the old building. If architects could only be content, in rebuilding such places as these, to keep to the old quiet style of the place, to avoid the (apparent) desire to outdo all that has gone before, there would be less dissatisfaction about rebuilding when dilapidation has rendered it desirable. That the complete scheme, if carried out, will result in an excellent set of buildings we have no doubt, entirely creditable to their architect if they were a first erection on a new site. Viewing them as a replacement of the old college, and taking the portion of that which is to be left as the datum to go upon, we cannot but feel some sympathy with those members of Pembroke College who complain that the old character of their college is being destroyed, and its associations annihilated. We hear that considerable rebuilding is in preparation at Jesus College; and it is because this sort of operation tends so much to repeat itself that we cannot help giving a caution and admonition against unnecessary pulling to pieces and rebuilding. We all know how this sort of thing goes on, and how few people can rest in peace when their neighbour has refurbished his house or restored his church, without at once wishing to rival him; and if this sort of spirit were once encouraged in Cambridge, there would soon be an end to half the interest and association of the place. We hope the heads and fellows of colleges, and others who have influence or authority, will set their faces against wanton demolition of buildings the historical and architectural associations of which, once gone, nothing on earth can replace.

One of the new sights for the architectural visitor to Cambridge is the decoration of Trinity Chapel by Messrs. Heaton, Butler, & Bayne; the chapel being only recently completed, and the ante-chapel still in the hands of the decorators. The work affords the opportunity of estimating the effect of coloured decoration on the walls combined with colour in the windows, a combination often condemned on high critical authority, and which the present experiment does not altogether tend to recommend. Messrs. Heaton & Co. of course know all about the requirements of stained glass, and have not attempted to make the wall-decoration vie with it in brilliancy; but the subordination is not complete, and the

eye is confused, in looking along the apartment, between the reflected and the transmitted colour, of which the latter goes far to kill the former. The wall decorations consist mainly of conventional foliage, in large panels, and in which gilding is very largely used,—the most effective material for competing, and at the same time contrasting, with the colour in the windows. The panelled wood ceiling is painted, in the panels, with symbolical devices and angels, &c., on the dark wood ground; the general effect is good, though the host of archaic symbols and figures seem as little in keeping with modern feeling and modern education as with the style of the Renaissance building. The Papal chapel of the sixteenth century was painted by Michelangelo. The chapel of the most celebrated educational establishment in nineteenth-century England is painted by a firm of decorators. The contrast is curious, and suggestive. The mass of gilding over the reredos is in keeping with the style, and has what is termed a "gorgeous" effect, not altogether displeasing to the eye. The windows, considering that they are not all by the same makers or designers, show a happier conformity of style and tone of colour than is generally secured in such cases.

Among other items of novelty in connexion with architectural embellishment, there is talk of a large new window for King's Chapel, by Messrs. Clayton & Bell. Other operations did not come under our notice during a hasty visit, except that the singularly uninteresting bit of road which leads from the railway station up towards the town is getting made more hideous by red and white brick "villas" of the most vulgar type. The approach or entrance to Cambridge is certainly not inviting to the architectural visitor.

THE AMENDED RIVERS POLLUTION BILL.

WE have seen a copy of the "Pollution of Rivers Bill," as amended on report on recommitment, and ordered to be printed the 8th of July. The new title of the Bill is "An Act for the Better Prevention of the Pollution of Rivers." The law as to pollution is now confined to three heads,—viz., solid matter, sewage, and liquid pollution; the suggestion which we made on the subject (*Builder*, No. 1685, p. 456) having been literally adopted. We are also glad to observe that an evasion of the penalties enforced by the Bill, which was feared to be possible by placing cinders or other solid refuse not in but near the channel, is estopped by a definition of the word "convey," which is given under the interpretation clause. It seems incredible that such an evasion should have been allowed; but it is in evidence that such has been the case, so that the addition is of much importance.

To the second clause, prohibiting the conveying of solid refuse into a stream, there is, we are glad to say, no exception. To the third clause, prohibiting the conveying of any solid or liquid sewage matter, there is a delay as to proceedings under the Act until after the end of the year 1876, or until the expiration of any further delay that may be granted by the Local Government Board, if matter of the same description has been conveyed to the stream in question before the month of January, 1875. There is also the elastic, not to say unmanageable, clause, "Such person shall not be deemed to commit any offence against this Act so long as he is using the best practicable and available means to purify such matter before it is conveyed into the stream." As to the fourth clause, prohibiting the conveying into the stream of any poisonous, filthy, noxious, or polluting liquid proceeding from any trading or manufacturing process, or from any mine, no proceedings are to be taken, in cases where such conveyance was in operation before the commencement of the present year, until Parliament shall have authorised such proceeding to be taken.

Thus altered, or, in technical phrase, amended, the Bill only erects a barrier against any fresh pollution; leaving the actual condition of the rivers unimproved. Nor does it quite effect even so much as this. As we read it, if a manufacturer had been in the habit of conveying a gallon of poisonous liquid into a river in the course of a week, before the 1st of January last; and were now, emboldened by the result of the stand made against legislature dealing with the case, to pour in a million gallons in a week, or in a day, he would not only be out of the reach of the Act, but would be establishing a user in his own behalf against any future Act. This obvious source of danger we hope will be met by those who have charge of the Bill.

With regard to the farther exceptions it seems useless now to say much. We very much regret that the Government should not feel justified in adopting a stronger policy. To pass the enactment as it stands will, of course, be a positive gain; but it can only be accepted as such by sanitary reformers, on the distinct understanding that the measure is only provisional. If that be distinctly promised, and if, at the same time, steps be taken for collecting the results of our actual experience, and for communicating them to the public under efficient authority, we shall be thankful; on the principle that half a loaf is better than no bread.

The important ninth clause of the original Bill stands, unaltered, as the eighth clause of the Amended Bill. It is from the principle admitted in this clause, and from the adoption of such principle alone, that any rational expectation of real improvement in our water system is to be derived. The *morcellement* of sanitary authorities means the negation of sanitary reform.

THE DRAINAGE OF MADRAS.

THE Madras Government have just passed an order on Mr. William Clark's scheme for the drainage of the presidential capital, intimating that they consider it the most satisfactory solution of the problem likely to be attained, and instructing the Accountant-General to propose the best method for obtaining the requisite funds to carry it into execution. Madras has long had an evil reputation on account of its insanitary condition, as is shown by comparing its death-rate with those of the other Indian cities. In 1871–72 Delhi headed the list with a mortality of 41·3 per thousand; then followed Madras, with 33·4; while Bombay showed only 25·0, and Calcutta, 23·7 per thousand. Matters, moreover, have been getting worse; for in 1873 the death-rate of Madras was 36·7, and last year it rose to 37·1. Zymotic diseases are, also, unusually prevalent, and are partly traceable to the want of proper sewers. From its situation the city presents many difficulties to the drainage engineer. It stands on a sandy plain, the lowermost part of the city being from only 2 ft. to 6 ft. above mean sea-level, while the highest portions do not rise above 24 ft. above that level; and water is found in all parts of the town, a few feet above or below the level of the ocean. The local rainfall is very heavy, averaging above 50 in. per annum, and this quantity generally falls in about three months when, the lower parts of the town are apt to be flooded by the excess of storm-water during the monsoon. The total population of Madras has been ascertained to be 397,552, while the number which Mr. Clark's scheme provides for is only 317,479. This discrepancy is occasioned by the fact that the excluded 80,000 persons are scattered over suburban districts, extending for many miles, which are already provided with some sort of sanitary arrangement, and to include which would enormously increase the cost of the project. He also provides separate plans for the drainage of the city proper and of the old town of St. Thome.

Madras is at present almost entirely dependent for its drainage on a system of gutters on each side of the streets, with outfalls in the sea, the river Coum, and the cutting known as Cochrane's Canal. "These drains," Mr. Clark admits, "appear to be carefully attended to by the sanitary officer and his subordinates; but no amount of attention can render what are, in most cases, stagnant receptacles of filth otherwise than objectionable," and "objectionable" is a mild term to apply to the exhalations given off by these open drains when the hot Indian sun beats upon them. Mr. Clark would leave these drains to assist in carrying off the storm-water, which he excludes from his sewers, as an adequate provision for carrying it off would treble the outlay. He limits his proposal to the removal of all fluid filth proceeding from houses and manufactories, the subsoil-water from those localities where it is found in the soil near the surface, and the excreta of the population. The removable fluids of Madras have been recently greatly augmented by the new water-supply, which will ultimately yield 20 gallons daily per head of the population, and will be capable of extension to even 40 gallons. Owing to the limited number of fountains and the small number of houses supplied direct from the mains, the consumption is as yet only 7 gallons per head, and Mr. Clark suggests that measures should be taken to render the water more conveniently available by the people. He has based his calculations on an ordinary consumption of 20 gallons daily for each individual. As to the removal of the night-soil and excreta, he says, that the quantity is small as compared with the house drainage; so whether it is admitted into the sewers or not, the cost of the drainage will not be in the least affected. He regards the water-carriage system of drainage as the cheapest where, as in Madras, water can be procured in abundance; and while he recognises the economy of sewage utilisation prefers to let richer towns conduct experiments, and confines his attention to the collection of the sewage and its transport to the sea.

Mr. Clark proposes to do the work by a system of main and outfall sewers of brick or laterite in mortar, plastered with cement inside, and laid on concrete, or of concrete blocks cast to the required shapes; and of subsidiary stone-ware drain-pipes laid on concrete. The sewer-pipes will vary from 9 in. to 15 in. in diameter, and, being mostly below sea-level, no provision for flushing will be necessary. In order to facilitate the cleansing of these pipes they will be laid as nearly as possible in straight lines, with manholes at intervals not exceeding 300 ft. for the use of scavengers. Manholes will also be provided at the junction of one street sewer with another. The pipe joints will be made with Portland cement for three parts of their circumference, the remaining fourth at the top being packed with tempered clay, and covered with concrete to prevent the entrance of sand, but to permit small quantities of subsoil water to percolate through. The sewers will be ventilated by gratings fixed on the road surface, near to the manholes, and in connexion with them, at distances of about 100 ft. The total population of the drained area being taken at 300,000, the maximum quantity of house and subsoil drainage is calculated at forty-two gallons per minute per thousand inhabitants = 12·600 gallons per minute, and two engines of 35-horse power effective will, it is believed, be sufficient to raise this quantity. A pumping-station will be built near the centre of the area to be drained, and the pump will be closed from the outer atmosphere, and will cause no nuisance. The outlet, which like the suction-pipe will be of cast iron, will be laid at such a level as to admit of a brick culvert, 4 ft. 9 in. high, being laid beneath the surface, with an inclination of 5 ft. per mile, the total fall in the culvert being 10 ft. The town having been passed, the sewage will fall into an open excavation, carried through market-gardens and waste lands to the sea, where a length of 200 ft. of oval brick culvert will be constructed, with a further length of 22 ft. of stone masonry work, in which will be secured the junction lengths of a cast-iron 4 ft. 6 in. pipe, which will be continued into the sea at 1 ft. above sea-level for a distance of 100 ft., and supported on a screw pile jetty. At the end of this outfall pipe will be a valve, arranged to close by a float, so as to prevent the entrance of sea-water. The market-gardeners through whose property the sewage will run will be encouraged to irrigate their gardens with it, and it is hoped by Mr. Clark that eventually some capitalist may be found to take up the question of utilising the whole of the sewage available in the enormous area of low land near to which the channel passes.

The estimate cost of this scheme is 234,800*l.* for the whole area which it is proposed to drain, and the working expenses are calculated at 3,700*l.* per annum, while the annual instalment necessary to pay the principal in thirty years, with interest at 4½ per cent., will be 14,415*l.* As the *Madras Mail*, to which we are indebted for much of the foregoing information, points out this charge will be felt to press heavily, but it and the other local journals strongly advocate the scheme, and show that the pecuniary value of the lives lost and of labour wasted by sickness owing to unsanitary causes which the drainage should remedy is nearly ten times as great as the new burthen on the ratepayers. On this point Mr. Clark himself says:—"When it is stated that Madras is too poor a place to indulge in the luxuries of drainage and water supply, let it be remembered that loss and sickness and death are the penalties of filth, and that they are paid chiefly by the poor who cannot help themselves; but the rich do not escape, for when surrounded by such conditions as abound in this city nature frequently exacts the penalty from all'

rich and poor alike, who neglect or break her laws." There seems a possibility that Mr. Clark may have been deserted by his old patrons of the City of Palaces only to find a new and suitable sphere created for him in the southern capital. A paragraph of the official order says:—"The Government as well as the municipality being financially and otherwise interested in the complete development of the water supply, which is now retarded, owing as much to want of engineering knowledge and experience as to lack of funds, it would appear desirable that arrangements should be entered into for placing both the water supply and drainage in the hands of a competent engineer-in-chief, such as Mr. Clark."

THE DERBYSHIRE INSTITUTE OF ENGINEERS.

THE annual meeting of this body commenced on the 6th inst. at Nottingham. Having visited the collieries in the neighbourhood, the members drove through the pretty villages of Linby and Papplewick, along Papplewick-lane, to Sherwood Lodge, the residence of Colonel Seely, where they had been invited to luncheon, which was provided in a marquee on the lawn.

On the 7th inst. a meeting of the members was held in the School of Art, Lord E. Cavendish presiding, who said the present meeting was the fifth anniversary of the establishment of the Institute. It had for one of its objects the improvement of the working classes, and he was glad to see the kindly feeling now subsisting between employers and employed, and he hoped the Institute would be the means of maintaining and fostering that feeling.

There were discussions on Mr. Fowler's paper on "Hydraulic Apparatus for Loading and Unloading Pit Cages"; on Mr. Bainbridge's paper on the "Application of Mechanical Power in Colliery Operations"; and on Mr. H. Stokes's paper on "Boring and Boring Machines."

Mr. G. H. Wright then read a paper on "The Prevention of Over-winding"; and

Mr. M. O. Tarbotton, the borough surveyor of Nottingham, one on the "Sewerage Operations in Nottingham," in the course of which he said:—Nottingham is a town of about 100,000 inhabitants, and is situated upon the banks of the river Trent, and of its gentle tributary, the Leen. The Trent has a watershed of 4,076 square miles, 2,900 of which lie above the town. The Leen is a small river, rising in Robin Hood's-hills, above Newstead Abbey, and discharging into the Trent near the Trent Bridge. Another small stream flows through the town to the north and east, called the Beck, which rises in the Mapperley hills, and also discharges into the Trent a short distance to the east of the debouchure of the Leen. As in most other towns, the rivers have been hitherto made the receptacles of the aggregated filth of the community; and enormous sewers, necessary for the health and manufacturing interests of the people, daily disgorge their contents into the waters of the Leen and the Trent. The daily increasing impurity of the Trent for many years past, caused great annoyance to the landowners and the public generally, and the Corporation was pressed to seek other means of disposing of their sewage. Although the borough contains about 100,000 people, yet this does not represent the true size and population of the town. Nottingham is surrounded by six populous out-districts. These districts have each independent governing bodies, viz., Local Boards of Health or Sewer Authorities. Topographically, Nottingham lies at the base of the Leen Valley, and constantly receives all the upper waters of that basin; and the Leen acting also as the outfall sewer of the upper districts, the whole of their sewage passes through the borough on its way to the Trent. Application was made to Parliament, and a Bill prepared, which resulted in the Nottingham and Leen District Sewerage Act, 1872. This measure provides for:—(*a*) The definition of a district or watershed area, within and over which the powers of the Act are applicable. (*b*) The constitution of a Board or body corporate having perpetual succession and a common seal. (*c*) The construction and maintenance of intercepting sewerage works in the valley of the Leen. (*d*) The construction and maintenance of outfall sewerage works, and the purification or utilisation of the sewerage (*e*) The conservancy of the river Trent and the river Leen, and their several tributaries. (*f*) The extension of the powers of the Act under certain conditions to places outside the prescribed district. The first operation of the Board was the construction of an intercepting sewer in the valley of the Leen. Immediately after the formation of the Board a detailed survey of the Leen valley was made, and levels taken, and the lines of the sewer to intercept the whole of the sewage between Bulwell and Nottingham were carefully determined. This sewer was commenced near the end of the year 1873, and is in progress at the present time, about two-thirds of the whole work being completed. The total length of this sewer is 30,837 ft. 6 in., or about six miles. The total fall from the upper to the lower end of the sewer is 70 ft. 6 in., or an average of 12 ft. to the mile. The discharging power on the flattest gradient, and in the lower part of its length, viz., in the mile between Lenton and Nottingham, is 3,097 cubic feet per minute, or 27¼ million gallons per day. The cost of the work will be about 35,000*l*.

THE LATE MR. J. E. DOVE.

WE record, with much regret, the death on the 8th inst., after a long and severe illness, of Mr. John E. Dove, who for more than a quarter of a century has been connected with the *Builder*. Besides numerous miscellaneous contributions during that long period, some curious and erudite articles, under the signature of "J. E. D.," will be remembered, treating of signs and symbols and prehistoric matters. Mr. Dove had been connected with the press during the greater part of his life, but though he had published some distinct works, and contributed to various publications, he was so retired in his habits that he was but little known. He was, however, most assiduous and persevering in his labours, and his great integrity and courteous manner endeared him to those who knew him.

TAUNTON AND THE ROYAL AGRICULTURAL SOCIETY.

IN no place since the first show of the Royal Agricultural Society was held at Oxford in 1839 have the members received a more effusive and demonstrative welcome than they have done in the present meeting at Taunton. The decorations of the streets are of the most profuse character, and have involved the expenditure of much time, labour, and money. The money for the public decorations has been provided by subscription, but many of the inhabitants have been at great cost in decorating their own premises. One place of business at the corner of High-street, known as "The White Hart," of which the well-remembered Mr. and Mrs. Manning, of unhappy end, were host and hostess, must have cost the present occupier not less than 150*l*. If it be true—and who can doubt it?—that a bit of red gives a lively appearance to anything, the streets of Taunton ought to present, and they do present, a very lively appearance indeed, being from the railway station to the show-ground quite a blaze of bunting, in which red prevails. The public decorations consist mainly of rows of Venetian masts, adorned with clusters of bannerets, and mottoes, more or less trite, and spiralled with box or coloured calico, the lower portions surrounded by evergreens. A wonder, in the mind of some visitors, is as to where such a large number of poles, and such a great quantity of box-foliage and bay-branches, can have come from. The masts are connected by festoons of evergreens; those in Hammet-street—the approach to the splendid church of St. Mary Magdalene—being in good taste. The decorations surrounding and about the parade, or *grande place*, of the town are also profuse.

A Fine Art exposition in Taunton Old Castle was opened on Monday. We hope its merits will be appreciated alike by inhabitants and visitors. The venerable historic building in which the exhibition is held is deserving of more than a passing notice. It should be mentioned that in addition to the display of bunting, a number of inhabitants made on Monday night an illumination, in which the devices were more brilliant than varied, stars being the staple device. Reverting to the Society's Show, it is to be hoped that it may prove successful, but the weather during last week, when the trials of implements were made, was generally very unfavourable, and a gale on Sunday morning and forenoon sadly damaged the decorations. On Saturday the exhibition was partially opened, when there was a comparatively slender attendance of visitors. On Monday it was fully opened as a five-shilling day, but the attendance fell short of what might have been expected. The weather was all that could be wished for, but it did not tempt intending visitors, who were probably like Mr. Gilpin, on pleasure bent, but of a frugal mind. The admissions compare very unfavourably with those of the last two years. They were at Hull, first day, 1,963; at Bedford, 2,581; at Taunton, 831. The next day, however, the weather having been brilliant, the attendance was considerably more than 9,000, the visitors streaming in from Bristol, Yeovil, Exeter, and the places surrounding Taunton, by the earliest trains.

The exhibition ground covers 55 acres; the exhibits, exclusive of live stock, are 4,214 in number; and the central sheds, measured on their ridges, aggregate about six miles.

ANCIENT MEASUREMENTS.

AT a recent meeting of the Society of Biblical Archæology, a paper on "Ancient Metrology," by Mr. F. R. Conder, C.E., was read. In this paper Mr. Conder indicated the confused and contradictory state of our present knowledge of the subject, and proceeded to establish an absolute metrical base, identifying the barley-corn, which the Hebrew writers state to be the unit of length and of weight with the long measure barley-corn and with the Troy grain. The grounds of identification were—(1) actual measurement and weight of full-sized grains of barley at time of harvest; (2) determination of specific gravity according to statements made in Hebrew literature; (3) actual dimensions of ancient Jewish buildings; and actual weight of a Babylonian talent now in the British Museum, which corresponded to Mr. Conder's determination of 960,000 Troy grains within one *per mille*. The remarkable double division of the Chaldee metrical system, which is both decimal and duo-decimal, was then explained, and shown to apply to measures of length, area, capacity, and weight. The origin of the Troy ounce, the diamond carat, the Spanish ducat, and other existing divisions, is traced to the early system employed by the Phœnician traders.

NEW WATER SUPPLY FOR LEWES.

AN era in the hygienic arrangements of the town of Lewes was inaugurated on the 9th inst. at the Waterworks, when the new supply which the company have obtained by their new boring was ushered into the new reservoirs which store the water issued to the town and its suburbs. One of the engines at the waterworks now throws 1,200 gallons per minute into the reservoirs from the new well and deep boring recently executed for the company by Messrs. Easton & Anderson, the engineers. The well is 24 ft. deep, lined with four cylinders 6 ft. 6 in. in diameter, and 6 ft. in depth, the bottom being embedded in brickwork and cemented. Projecting from the bottom is a 1 ft. 3 in. guide tube, which extends downwards about 6 ft. below. This is the boring through the rock from which the water issues. It is carried down about 120 ft. below the well. A suction-tube is fixed into the well, 7 in. in diameter, and at the end is a strainer, 12 in. by 15 in., which terminates within 1 ft. of the bottom. This pipe is attached to a pump worked by a 20-horse engine, which propels water into a 10½-in. pipe, running from the works to No. 2 reservoir, near the Black Horse Inn, St. Ann's. From this point the pipe is reduced to 6 in., and is carried on to No. 3 reservoir on the hill above the County Gaol. In addition to these two reservoirs there is another on Kingstone Hills, which is supplied from a pipe 8 in. in diameter, joining the 10-in. near the works. Lewes is now supplied with water of the purest nature.

Re-opening of Shorne Parish Church, Gravesend. — About three years ago the Ecclesiastical Commissioners undertook the restoration of the chancel of the fine old church at Shorne, which was soon after proceeded with. In the autumn of 1873 the Earl of Darnley announced his intention of restoring the Randall Chapel, in which he had vested rights; and at the same time he obtained from his architect, Mr. T. H. Wyatt, of London, a design for the restoration of the body of the church. Altogether about 3,200*l*. have been expended in the work, which has been carried out by Mr. Vaughan, of Maidstone.

HENRI LABROUSTE, ARCHITECT.

FRENCH art has sustained a great loss in the death of M. Henri Labrouste, at Fontainebleau, on Thursday, the 24th of June. It would need a long obituary notice to do full justice to his works, and to his educational influence in his art; and no doubt the Institute of France, the *Société Centrale des Architectes*, and the Royal Institute of British Architects, of all which societies M. Labrouste was a member, will not fail to record in their annals the important place which this gifted and modest man occupied in the ranks of his profession: our aim here is only to recall the prominent phases and incidents of a long and fully-occupied career.

Pierre François Henri Labrouste was born at Paris in 1801, the youngest of several children, one of whom became director of the celebrated *Collége Sainte-Barbe*, and another was, like the deceased, an architect of ability, and, though the senior, survives him. After a good general education, he entered the *atelier* of M. Vaudoyer, sen., and subsequently that of M. Hippolyte Lebat, and studied architecture under these two respected masters, and at the *École Royale des Beaux-Arts*, where he was not slow in realising a brilliant success. In fact, at the age of twenty he obtained the *deuxième grand prix* for a design for a "Palais de Justice"; at twenty-two, the *prix départmental* (at that time bestowed on the pupil who could count the greatest number of successes); and lastly he obtained in 1824, at the age of twenty-three, the *premier grand prix* for a design for a "Cour de Cassation."

The five years from 1824 to 1829 were accordingly passed by Henri Labrouste in travelling over Rome, Italy, and Sicily, at the cost of the French Government; and seldom has a gift of this kind from the public funds been better employed; for the study which he sent home, in 1828, of his designs for the restoration of the Temple and Basilica at Pæstum, comprising an essay and twenty-three sheets of drawings, is one of the most remarkable and splendid collections of drawings of its class, and one which, it may be added, may at the present day, after an interval of nearly fifty years, still be adduced as a model of conscientious investigation.

When Labrouste returned to Paris, M. Felix Duban attached him to his staff, as inspector of construction in the "École des Beaux-Arts"; and in 1840 he was charged, along with M. Visconti, with the important duty of superintending the decorations in connexion with the funeral ceremony consecrating the return of the remains of the Emperor Napoleon I. to France. Labrouste displayed real talent in his application of architectural design of a high character to these decorations, and owed to this mainly the ribbon of the Legion of Honour, which was bestowed on him shortly afterwards, in 1841. In 1848 he was again called upon to undertake the decotion of a funeral ceremony, this time for the victims of the insurrections of June of that year.

Since his return from Rome, however, he had himself opened an *atelier*, where he collected some of his future brethren in the art, giving them the same insight into the spirit of ancient art which he had acquired himself, and inculcating the observance of the rigorous laws which construction imposes upon architecture itself even more than on decoration. From the period of his career when Henri Labrouste and his friends Duban, Vaudoyer, Duc, and Constant-Dufeux carried on internecine war with the tendencies of the "official" French art of the period (an opposition most strenuous on the part of Labrouste), we may date the formation of a remarkable group of artists, among whom, besides those whose loss we have to regret (Lassus, Laval, and Sibert), we may count MM. Boeswilwald, Lheureux, Millet, Mimey, Lisch, Darey, Verdier, Vandenbergh, Bouwens, Leon Dupré, Simonet, &c.

In 1849 and 1850, Labrouste was able at last to realise his dream, and to make, in a great building of a superior class, the application of five-and-twenty years of study. The Library of Ste. Geneviève, a work really remarkable, and, in a sense, typical, shows all his genius as a designer and constructor, and marks an epoch in modern French architecture. Everything, externally and internally, is praiseworthy in that great reading-room and its adjuncts, so complete and yet so simple, in which the solidity and massive character of the general design are relieved by decoration graceful in character and entirely in keeping throughout. After this achievement Labrouste was created, in 1852, an officer of the Legion of Honour.

Being charged, on the death of M. Visconti, with the work connected with the enlargement of the National Library, Henri Labrouste left his mark there also, by the best-known and most interesting of all his works, we mean the restoration of the portions adjoining *Rue Vivienne*, *Rue Neuve des Petits Champs*, and *Rue Richelieu*, and the new reading-room with its vast magazines of books, and its accessory departments of service. It was with these latter works that he was almost entirely occupied at the time of his death.

Besides the above-named works, Labrouste, as "general inspector of diocesan edifices," exercised a most important influence upon this branch of architectural work and on the edifices, ancient and modern, under this department. He was likewise member of the "Commission des Monumens Historiques"; and among the beautiful drawings which procured him, in the "Exposition Universelle" of 1855, a medal of the first-class, we may mention his studies of the Tour de Monthléry, exhibited in 1867 at the Palace of the Champ-de-Mars.

It was only in 1867 that the Institute of France opened its doors to him; and in 1868 the "Royal Institute of British Architects" and the "Royal Society of Portuguese Architects" both elected him an honorary and corresponding member. He was, besides, member of the "Commission des Beaux-Arts de Ville de Paris" and honorary member of the "Société Libre des Beaux-Arts," and of the "Société des Architectes de Lille et de Clermont-Ferraud."

As to the "Société Centrale des Architectes," Henri Labrouste was, in 1841, concerned in its formation (and indeed designed its remarkable medal of membership), and was successively member of its council, secretary of important committees, then vice-president, and was elected president in 1873. It was in that capacity that he presided in 1874 and 1875 over the second and third sessions of the Congress of French Architects; and our readers will have seen in the *Builder* of the 19th and 26th of June (pp. 544, 564, *ante*), how he gave on that occasion evidence of his devotion to his art, while his name formed the best rallying-point round which the architects of France could group themselves.

Paris. CH. L.

DWELLINGS OF WORKPEOPLE IN PENNSYLVANIA.

IN Philadelphia the dwellings of the industrial classes are of brick, and are distinct houses, in regular "blocks." The greater number are built 14 ft. wide, and two stories high, on lots averaging 50 ft. in depth; the house containing four complete rooms, with usually a bath-room in addition, projecting back from the second floor, and a covered porch beneath; as both these can be used in case of need, the one for a sleeping-room, and the other for an outer room or summer kitchen, the house may easily be converted by its occupants into a six-roomed dwelling. The height of the cellar is 8 ft., 2 ft. of which are above the level of the pavement; the ground floor, or first story as it is called, is 9 ft., and the second story 7 ft., from floor to ceiling. The rooms are 15 ft. each in depth, and the entrance-hall is 3 ft. wide, the staircase rising at the rear to the second floor.

The cost of houses of this class is 300*l.* to 400*l.* each, for a title in fee; and they can be purchased by making a small cash payment, say one-fourth to one-eighth of the whole cost, with mortgage or other security, for so much more as shall make up one-half the value, the other half being left at a permanent rent of 6 per cent. per annum, called a "ground-rent." This ground-rent may vary in amount, as it represents the cost of the land built upon, but it is generally about half the cost of the whole property. The interest is always the legal rate 6 per cent. Thus a mechanic with 50*l.* to 100*l.* cash can always purchase a roomy, well-ventilated, and very comfortable house, arranging for the payment of the balance of the consideration-money in easy instalments, and obtain the title in fee subject only to the ground-rent referred to. The house may be rented at 2*l.* 10*s.* per month for the cheapest, 2*l.* 16*s.* for others, and from 3*l.* to 3*l.* 10*s.* for the very best. Great numbers of this description of two-story dwellings have been erected in Philadelphia within the past fifteen years. All are neatly built, pleasant, and attractive, many having dressings and door-steps of white marble. They constitute a striking and interesting feature of the newer districts of the city.

Another class of two-story brick houses is largely built as residences for craftsmen, differing only in having six full rooms, three on each floor, and in giving a better finish to the whole, adding heating, furnace, gas, &c. These are valued at 400*l.* to 700*l.*, each according to location, and may be purchased in the same way as the others, half cash, and half on ground-rent. They rent at 4*l.* per month on the average. All have bath-rooms, and are supplied with gas fixtures. The more costly are 16 ft. in front, and 40 ft. to 44 ft. deep. All these two-story houses front on regular streets, the length of the square being 400 ft. to 500 ft., the streets 30 ft. to 50 ft. wide, and at the rear all open into alleys from 4 ft. to 6 ft. in width.

Three-story brick houses are also largely occupied by mechanics and working men in Philadelphia. These dwellings are similar to the best class of two-story houses, with an additional story and larger lots. They can be purchased in the same manner as the smaller houses, and rent from 4*l.* to 7*l.* per month, according to the amount of interior conveniences.

The records of building in the city show that from 1855 to 1871 upwards of 20,000 houses such as we have described have been erected, of which 18,000 are occupied by mechanics, or other people at wages, with an average of six and a half persons to each house, or a total of 117,000 people so housed. It may be stated generally that one-half the industrial classes occupy separate houses, the other half being in houses of an older style, and with more than one family, or with rooms occupied by lodgers.

The coloured population occupy the oldest and poorest dwellings. They let rooms, and crowd lodgers into them. Irish labourers do so to some extent, also the Germans of the poorer class.

The builders of the houses named state that two-thirds have been sold to their occupants,—a fact which speaks highly for the thrift and industry of the Philadelphian workpeople.

Lodgings are let at an average of 30*s.* per month for one room, and of 2*l.* 4*s.* to 2*l.* 18*s.* per month for two rooms. The houses in the older sections of the city, so occupied, and in which lodgings are let, are generally clean and comfortable. They present no evidence of extreme distress, the occupants appearing to have some certain means of living.

In a few interior cities, such as Reading, Lancaster, Harrisburgh, Pittsburgh, Erie, &c., there are many comfortable houses of brick similar to those above described, but generally in the smaller towns they are built of wood, a few being of stone. The prices paid for these houses are about one-half the price of those in Philadelphia. Rents are also about one-half, or 37*s.* per month, for a decent two-story house of four or six rooms. In the summer, the comfort of the lodgings and houses of workpeople in the country is equal to or greater than those in the city; but in winter the reverse is the case, and the inhabitants of the interior often suffer needlessly from badly-protected houses. The advantage of a garden is usually obtainable in the country, and smaller towns, but it is neglected to a great extent, not half the number availing themselves of it. In the city a garden is rarely or never available.

The hours of labour in the cotton and woollen manufactures, and, indeed, generally throughout the State, are ten hours a day. Extra work beyond that period receives extra compensation.

As regards the purchase-power of money, it is 75 per cent. in favour of Great Britain; that is to say, 1*l.* in England is equal to 1*l.* 14*s.* in Philadelphia. It would seem, taking as a basis the living of a carpenter, wife, and three children, that a respectable Philadelphian mechanic comfortably subsists on 2*l.* 13*s.* 3*d.* per week, whereas a British mechanic of similar grade would not spend more than 1*l.* 11*s.* 10*d.* per week with equal family, showing a difference in favour of the British mechanic of nearly 70 per cent. What, then, is the difference in wages? The Philadelphian mechanic earns 3*l.* 6*s.* 7*d.* per week; the British mechanic, 1*l.* 16*s.* to 2*l.* 2*s.*; thus showing a difference of about 60 per cent. in favour of the wages of the former. Deducting the cost of living from the wages of each mechanic, the Philadelphian mechanic is 3*s.* per week better off than the other. If the British workman could save a similar amount, he would be 70 per cent. better off than the Philadelphian, the purchase-power of money being to that extent in favour of England.

THE HISTORY OF PAPER-HANGINGS.*

PREVIOUS writers on the history of paper-hangings do not seem to have searched the list of patents granted to inventors in this country since the year 1617. The information derived from these records has thrown considerable light on the subject, and has afforded the earliest allusion to them that I have discovered. The introduction of paper-hangings appears to have been foreshadowed by the invention of George Tomlyn, in 1662, when he obtained the following patent:—"A newe way to text and florish Veloms and Parchments with our name, pourtrachure, imperial armes, badges, and other ornaments, by printing the same with a rolling printing presse and engraved plates to the greate benefitt of our subjects, for that as good worke otherwise wrought cannott well be afforded for tenn tymes the price, the worke being likewise very neate and of good ornament to our letters patent and other exemplicacions." Whatever the precise object of this invention, it is evident that it was a kind of printing which approached the manufacture of paper for hanging upon walls. In the year 1692,—thirty years afterwards,—the first patent for paper-hangings was obtained by William Bayly, and it is, without exception, the earliest notice that I have been able to find regarding this inexpensive and convenient form of decoration:—

"William and Mary, by the Grace of God, &c., and all to whome these presents shall come, greeting. Whereas William Bayly hath, by his humble peticon represented vnto vs, that he hath by his industry, and his great expence, found out and invented, 'A new Art or Invention for Printing all sorts of Paper of all sorts of figures and colours whatsoever, with severall engines made of Brasse and such other like Mettals, with Fire, without any paint or staine, which will be usefull for Hanging of Rooms, and such like vses,' and that the said invention hath not been heretofore knowne or practised by any of our subjects, and hath humbly prayed vs to grant him our Letters Patents for the sole vse thereof."

The date of this patent seems to fix the exact time when the manufacture of paper-hangings began in England. Such is clearly expressed in the document, and there is no previous information of such paper-decorations being in use. It has been already shown that the manufacture of plain paper had just commenced, so it may be assumed that the use of paper-hangings began immediately after it was possible to obtain paper for the purpose. The precise mode in which Bayly printed his paper-hangings is not very clear, though it must have been sufficiently near to the present block-printing as not to have rendered another patent necessary. The earliest attempts are supposed to have been in imitation of the tapestry, velvet, silk, linen, and cotton hangings then in fashion, and they were naturally called paper-hangings. It seems impossible to ascertain whether they came into frequent use soon after they were introduced; though it is very probable that the demand for such a cheap form of decoration rapidly increased with the production of suitable paper; for in the year 1712, in the reign of Queen Anne, the manufacture attracted the attention of the Government, and a duty was imposed,—just twenty years after the invention of Bayly. The following is a copy of the Act:—"And it is hereby enacted, That for and upon all Paper which, at any Time or Times during the Term last mentioned, shall be printed, painted, or stained in Great Britain, to serve for Hangings and other Uses, there shall be answered and paid to Her Majesty (over and above the Duties payable for such paper before printing, painting, or staining thereof) the sum of one penny for every Yard square, and after that rate for a greater or lesser Quantity, to be paid by such person or persons as shall print, paint, or stain the same." This duty was distinguished by being a second charge upon an article highly taxed in its plain and simple state. The duty on all kinds of plain paper was also imposed under the same Act, before which there was no restriction on it. However, only two years afterwards a general increase of the paper duties took place, when that on printed, painted, or stained paper had an additional duty of one halfpenny for every square yard imposed on it. The words of the Act are exactly the same as the one quoted, with the exception of the alteration of the amount of the duty. In a piece of paper-hangings there were from 16 to 24 sheets, and these altogether contained eight square yards, the duty upon which, at 1½d. per square yard, amounted to 1s. per piece, with an extra charge (probably 5 per cent.) in addition, and no change was ever made after the second impost in 1714. The duty was usually supposed to be 1½d. per square yard on the paper actually printed, and not on the whole of the paper, including margins and joints. This seems to have been the mere popular notion, and the duty amounts to the same within a fraction by either mode of calculation. In the year 1715 an Act was passed to render the collection of duty on stained paper more effectual, and each sheet had to receive a Government stamp. There seems to have been a difficulty in collecting the duty, for in 1792 there was another "Act for more effectually securing the Duties of Stained Paper for Hangings." Paper-stainers had to procure an annual licence, which cost 4*l.*, that paid by paper manufacturers being 4*l.* 4*s.* In 1836 the number of licences was 150, and produced the sum of 600*l.*

Paperhangings imported from China are said to have been frequently used in the reign of Queen Anne. Some writers are of opinion that these Chinese paperhangings originated the idea of the manufacture in England, and that the art had been long pratised in China; but there is no reason for supposing that they did more than give an impulse to the use of such hangings. Chinese and Japanese paperhangings are occasionally brought home at the present time. They are, probably, partly printed and afterwards finished by hand. From 1712 a long period ensued during which I have not discovered any notice of paperhangings. Doubtless the duty weighed heavily on the trade, though such progress had been made during the interval that it had attained the perfection of a settled branch of industry. In the year 1724 Robert Redrich & Thomas Jones took out a patent "for making, marbling, veining, spotting, staining, clouding, and damasking any linen, silks, canvass, paper, and leather"; but it may have had little or no connexion with the trade. In 1746 the blocks used for printing paperhangings were very long,—some more than two yards,—and were made of light material, so that they could be easily handled; but it was soon found necessary to construct them in a more substantial manner when they were heavier, and had to be much shorter. The patterns produced at that time are said to have been principally geometrical designs. In 1753 Edward Deighton obtained a patent for "An entire new method of manufacturing Paper for Hanging and Ornamenting of Rooms, and other purposes, and that the same will be of great use and benefit to the publick." This method consisted of etched or engraved plates of metal. The design was impressed on paper under a rolling-mill, and then painted or coloured by hand, with pencils "called camell-hair pencils." Deighton used gold-size in gilding his designs.

About the same time, 1754, a manufacturer of paperhangings at Battersea, named Jackson, published a work on the invention of printing in chiaro oscuro, an imitation of stucco and bas-relievos, and its application to his business, with illustrations. He produced Classical subjects and landscapes with such decorative borders, festoons, and flowers, as to cover the wall with a general design. Possibly he was the first to introduce these varieties of ornament. From Jackson's account it is evident that paperhangings were then in general use; though they were, doubtless, rather expensive, and used principally in the houses of the wealthy and places of public resort. He says that "The person who cannot purchase the statues themselves may have these prints in their places, and thus effectually show his taste. 'Tis the choice and not the price which discovers the true taste of the possessor; and thus the Apollo Belvedere, the Medicean Venus, or the Dying Gladiator, may be disposed of in niches, so surrounded with a mosaic work in imitation of frames, or with festoons and garlands of flowers, with great taste and elegance; or, if preferred, landscapes after the most famous masters, may be introduced into the paper." Whether Jackson prevailed on many persons to show their taste by purchasing his statuary, it is of course impossible to ascertain. At this period English paper-hangings are said to have been much superior to those of the French, both with regard to execution and beauty of design.

In an old work entitled "The Handmaid of the Arts," printed for J. Nourse in 1764, there is a very minute description of the manufacture of paper-hangings, from which it is evident that the trade must have flourished for a long period. It states that "there are three methods by which paper-hangings are painted; the first by printing on the colours, the second by using the stencil, and the third by laying them on with a pencil, as in other kinds of painting." Each of the three processes is minutely described; and the mode of printing by block-work so nearly resembled that of the present time, as evidently to be the result of long experience in the trade. The method of stencilling is minutely shown, "the pattern being formed of a piece of leather or oil-cloth, in which the design was cut. This, on being spread out on the paper and rubbed over with colour by means of a brush, coloured the parts of the leather or cloth that had been cut away." Stencilling was considered "to be cheaper than printing with blocks, but the work was not so perfect, or free from blemishes as the former method." The author says, that "pencilling is only used in minute work, for the purpose of filling up outlines, and embellishing a design with details requiring exactitude, freedom, and variety of outline." Paper-hangings finished by this process are said to have been very effective, and were probably equal to the work produced by block-work at the present time.

In the same old work is an account of an "embossed sort called flock paper, *chopt-cloth*, which is of very late invention and is a great improvement of the manufacture of paper-hangings, both with regard to beauty and durableness." The author mentions "imitations of velvet, damask, brocades, chintz, and other such silks and stuffs as are employed for hanging rooms," thus incidentally describing the modes of decorating then practised, and which paper-hangings had not up to that period altogether displaced. The reference to "brocades" possibly confirms the use of gold, and perhaps silver, for the meaning of the word in "Bailey's Dictionary," 1722, is "cloth wrought with gold and silver," though it has not such a limited signification now. Allusion is also made to paper-hangings with varnished grounds, and various details connected with the trade.

I have been informed by Joseph Pearson, of Whitehaven, that his employer had a large piece of paper, torn from a wall in an old mansion in that neighbourhood, when under repairs and alterations, about 1786, which was supposed by the owner to have been on the wall about two hundred years. He says, "I recollect examining this, and it appeared almost as thick as cardboard. It had been put on the wall in sheets, and a thick dark substance like varnish had been used, instead of paste. It was very rudely done in pattern (like piece enclosed); and stalks and branches, some of the leaves, and part of flowers in bouquets had been stencilled, but all were finished by hand."

"There were three or four Welsh regiments of militia quartered in Whitehaven between 1790 and 1796, and with one (Montgomeryshire) was a trumpter, Edward Humphries, a stenciller, who married and remained in Whitehaven, where he practised his trade, which had been in his family for three or four generations. Many of the patterns were cut in thin sheets of metal like zinc, and others in brass. The plates were slightly heated each time before they were placed upon the wall, to prevent the size-colours from clogging." This proves that stencilling was a regular trade in this country a century ago.

In 1786 Sherringham, of London, is said to have been the Wedgwood of paper-stainers. He was a man of considerable taste, and had travelled on the Continent. By employing a number of artists of first-rate ability, including two Italians, Rosetti and Louis, who were of some repute at the time, he was enabled to infuse into the art a style and beauty before unequalled.

In the year 1792 Antony G. Eckhardt took out a patent for laying coats of composition or paint on paper and other materials, for receiving impressions of engraved copper plates; and in 1793 Francis F. Eckhardt another patent styled an "Invention and Method of preparing and printing Paper in different patterns, and to silver it over with fine silver leaves, so as to resemble damask, lace, and various silk stuffs, to be used for hangings and other furniture for rooms." The silver was described as laid on with gold-size as at present. Gold is not mentioned, though it must have been used, and it is mentioned in another patent taken out by Eckhardt the following year; probably the former patent is the first use of silver.

The so-called gold used for paper-hangings

* From a paper by Mr. George H. Morton. Read at a meeting of the Liverpool Architectural Society. Since published *in extenso* at 122, London-road, Liverpool.

was the invention of John Hantsch, of Nuremberg, who died in 1670, and it is a preparation of tin. Other metals treated in a similar manner produce various metallic colours. Though the use of this substitute, bronze, for gold, is not mentioned in connexion with paper-hangings, there can be little or no doubt that it was the gold supposed to have been in use. A similar substance in the condition of leaf, which is an amalgam of tin and copper, was probably also used. It produces a much more brilliant effect, though it is not more durable.

In the same year (1793) Eckhardt obtained a patent for preparing linen or cotton-cloth with stiffening, starch being used; afterwards printing and ornamenting it with gold and silver; and, finally, varnishing, so that it could be washed. He says it was "to be used for hangings and other furniture of rooms." This patent proves that gold (that is, a substitute for it) was used at the time, and it shows that paper had not altogether taken the place of other materials. Eckhardt's establishment must have been a large concern, for artists of considerable talent,—Boileau, Fouglet, Joinot, and Jones,—were retained for finishing the designs by hand, while more than fifty young girls completed the less important parts. In 1796, John Gregory Hancock obtained a patent for "A new manufacture, videlicet, paper ornamented by embossing and enchasing"; but the first patent for embossing paper as now practised was obtained by Thomas Cobb in 1829.

The heavy duty which was imposed on the manufacture of paper-hangings, immediately after they came into use, was a great burden upon the trade, and at the beginning it must have yielded a very small amount. In spite, however, of this restriction, the trade gradually progressed, as the following returns of duty paid by paper-stainers will show:—

Duty* paid by paper-stainers,

In 1770 was	.....	£13,242	8	11
In 1780	„	11,955	4	3
In 1790	„	19,204	18	8
In 1800	„	24,811	8	7
In 1810	„	32,228	18	2
In 1820	„	34,246	6	4
In 1830	„	44,835	4	9
In 1833	„	53,986	6	5
In 1834†	„	63,795	16	9

Besides the duty on the plain paper of 3d. per lb.

From the descriptions handed down respecting the manufacture of block or hand-made paper-hangings to the close of the last century, it appears that the process very nearly resembled that of the present time. There have been improvements gradually introduced by the experience of manufacturers, which have resulted in bringing the printing process to the great perfection it has now attained; although, in the absence of almost any vestige of specimens of the old manufacture, there is a risk of supposing the advance to be greater than it really is. A hundred years ago, when paper-hangings of the highest class were finished by hand, the workmanship must have been of a superior character; though probably few of the designs would meet with approval now.

The earliest specimens of paper-hangings that have attracted attention are those hung on some of the picture-galleries at Hampton Court Palace. In a paper "On Paper-hangings" read before the Decorative Art Society, by Charles Cowtan, and published in their "Proceedings" for 1844, and also in the *Builder*, vol. ii., the author, after referring to the invention of flock by Jerome Lanyer, in the reign of Charles I., which he seems to associate with flock paper-hangings, states that "at Hampton Court specimens of the early productions may still be seen, mostly painted over in distemper, but the patterns can be distinctly seen." During a visit to the palace, I found on King William III.'s bedroom, a large flock pattern of a conventional design, on a salmon-coloured ground. The pattern is about 6 ft. in length, and is complete upon each breadth of paper, so that no matching at the edge was required. On the king's dressing and writing rooms, there is a scroll pattern, which does extend from one breadth to another, and the paper has been coloured over so as to resemble painted flock. Another apartment, Queen Mary's closet, is hung with a smaller scroll of flock, on a crimson-embossed ground, which is very much faded. Of these paper-hangings, the pattern on the king's bedroom is the most remarkable; but they all closely resemble the designs that were common forty and fifty years ago. The breadths are all composed of a single piece, not of small sheets fastened together. As paper of that length could not be made before the beginning of the present century, and was not in use much before 1830, they cannot be very old.

In order to ascertain if any information could be obtained from the authorities at Hampton Court, I wrote to the First Commissioner of her Majesty's Works respecting these paperhangings, and was informed that the Board of Works were unable to furnish any reliable information upon the subject. During a recent visit I found no person now connected with the palace who remembers the rooms being papered, and no record has been preserved on the subject; but it is improbable their age can much exceed fifty years. They are evidently of English manufacture.

Fifty years ago, paper-hangings had to be made of a number of sheets of paper, usually 23 in. by 28 in., fastened together so as to form the required length of 12 yards. In 1799 a French operative, Louis Robert, made the first attempt to produce paper in an endless length, and was successful with a small model machine. The invention was purchased by Leger Didot, and a relation of his in England, John Gamble, obtained patents for it in 1801 and 1803, "for making paper without seam or joining from 1 ft. to 12 ft. in width, and from 1 ft. to 45 ft. and upwards in length;" and in 1805 Joseph Bramah obtained a patent 'for making paper in endless sheets.'" This great improvement was the result of the continuous efforts of Messrs. Fourdrinier, of London, who spent 60,000*l.*, without reaping any benefit, in perfecting the Papermaking Machine, before which all paper was made by hand. No immediate advantage to paper-stainers was derived from the invention for many years, and it was not till 1830, or thereabouts, that they were able to use the plain paper in a continuous length. It could have been obtained, but the Excise would not allow it. Each of the sheets composing the length of paper had to receive the Government stamp, and this probably caused the objection to any change or improvement being made. In the "Report of the Commissioners of Inquiry into the Excise Establishment," dated 30th June, 1835, there is a large amount of evidence showing how the manufacturers were hampered, and the Government is recommended to abolish the duty on stained paper. A partner of the firm of Williams, Cooper, & Co., stated that his house had made application for three successive years to have the paper made in lengths of 12 yards, instead of sheets, which had to be pasted together, rendering the paper very unsightly, and causing great expense and trouble, but had been refused, until the French introduced them a few years after. When this difficulty was removed, an impulse was given to the trade.

The repeal of the duty on paperhangings took place in 1836, when the duty on plain paper was reduced from 3d. to 1½d. per lb. These changes brought about quite a revolution in the trade, great improvements were effected, prices reduced, and paperhangings came into more general use. Previously to 1825, the importation of all foreign paperhangings had been absolutely prohibited, but in that year a duty of 1s. per square yard was imposed. The reduction of the duty on French paperhangings in 1846, from 1s. to 2d. per square yard, caused British manufacturers to improve their designs, so as to successfully compete with them, and the duty was altogether removed in 1861, the same year as that in which the paper duty in Great Britain was finally abolished.

* Representing 255,731 pieces.

† Representing 1,232,753 pieces. A single firm made 12,000,000 pieces last year, 1874.

MR. E. W. TAYLOR, C.E., OF CONSTANTINOPLE.

THE death of this gentleman is much deplored. He was originally employed as foreman in Maudslay's factory. The Ottoman Government sent a request to the English Government to be supplied with an engineer capable of directing the construction of the new buildings and shops of the marine arsenal, and Mr. Taylor, although young, was chosen for the post. He arrived in Constantinople in the year 1833, and immediately commenced his work, which he speedily carried out with great success. Having finally established himself in that country, he married and became the head of a family, the members of which occupy an honourable position in Pera. Mr. Taylor was next employed in constructing several factories and other buildings, notably the cannon foundry, for the arsenal at Tophaneh. The plans of these buildings were drawn up by Mr. W. H. Barlow, whom Mr. Taylor afterwards succeeded. The Tophaneh buildings fully established Mr. Taylor's reputation in the eyes of the Turkish Government. During the Crimean war Mr. Taylor was employed by Admiral Grey in the construction of a dock at Yali Kiosk, for repairing the English men-of-war, which he completed in less than a year. One of his last works was the construction of the rolling-mills for the plates of ironclads at Hasskeui, which have worked most successfully for several years past. As a reward for the services he had rendered, Mr. Taylor was appointed engineer-in-chief to the Evcaff, in order to superintend the repairs of the mosques and the waterworks which are under the control of that Ministry. Mr. Taylor was universally esteemed for his probity and uprightness as well as for his amiable character.

A VILLAGE HOME FOR GIRLS.

IN connexion with Dr. Barnardo's work at the East End of London, a village home for girls has been commenced near Ilford Station, Barking Side. In the first instance it was proposed to bring together about sixty girls under one roof, but inquiry showed the objections there were to this system. After some reflection, it was thought that if they could erect little cottages, and have a good woman as the mother set over each, who might gather the children around her, and develope their higher instincts, they would be doing a work which would be productive of the best and happiest results. Friends grew up, and last month Lord Aberdeen laid the foundation-stones of ten cottages and of a chapel. The ten foundation-stones represented ten distinct gifts of 450*l.* each. The first was given by a friend in memory of a beloved daughter. The next was presented by a lady. The third was collected by undergraduates of Cambridge, and the way in which this collection was brought about was this: Dr. Barnardo had lectured in Cambridge, and had been very kindly received. On Christmas morning a letter reached him from about twenty University men, who formed themselves into a committee to collect the amount needed for a cottage, and begged his acceptance of it. One of the first cottages will therefore be "The Cambridge Cottage." The one on the other side of the entrance is named "The Clapham Cottage," and is the result of a collection made by one lady living in the neighbourhood of Clapham. The next is the gift of a lady so great an invalid that she was always compelled to use a Bath chair whenever she left her home. There is room on the ground for about thirty cottages, so if any of our readers should feel disposed to help in this undertaking, there is room for their endeavours. We have not heard the name of the architect employed, but we trust there is one, and that due regard will be paid to the necessity for proper sanitary arrangements.

VIADUCT BUILDINGS, NEAR CHARTERHOUSE STREET.

THE block of dwellings for the labouring classes which have been erected by the Corporation off the north side of Charterhouse-street, from designs by the City architect, were completed a short time ago, and are now occupied. The buildings are approached awkwardly by a flight of steps down Charterhouse-street, and thence westward by another long flight of steps leading up to the ground area in front of the dwellings. The block consists of the ground-floor and three ranges or flats above, approached by a stone staircase in the centre of the block. There are altogether forty dwellings in the block, ten on each floor, and each dwelling is perfectly distinct, with a separate entrance, as in the case of ordinary street houses, the only difference being that the houses are in flats one story above another. The houses on the several floors at each end of the block, project about 4 ft. from the rest of the elevation. A parapet, surmounted by a stone coping and iron cresting, protects a flat roof intended for clothes-drying purposes, and also for recreation. This roof is approached from the staircase already named. A balcony, with iron railings in front of each of the floors, gives access to the dwellings. Each house contains a parlour, bedroom, and kitchen, which are neatly finished and fitted. The parlour and bedroom are papered and painted, and the kitchen,

in addition to an ordinary fire range, plate-rail, dresser, and other fittings, contains a large copper for clothes-washing purposes, together with space for the stowage of coal, and other conveniences. The area in front of the ground-floor of the building is about 22 ft. in width, and is asphalted. Mr. Morter, of Stratford, was the contractor for the block. The rents of the houses at each end of the building, which in consequence of projecting beyond the general frontage are larger than the rest, are 8s. 6d. per week, and the remaining portion 7s. per week, free of all taxes. For some time before the houses were finished, there was an unlimited number of applications for them, and they are now all occupied by an apparently respectable class of tenants.

We are disposed to fear that one staircase is scarcely sufficient for the number of inhabitants, and that the position of the dust-bin will be found objectionable in at least two of the dwellings.

THE NATIONAL PORTRAIT GALLERY.

THE eighteenth annual report of the trustees of the National Portrait Gallery states that ten purchases have been made up to February, 1875, bringing up the total acquisitions by the Gallery, by purchase, to 280. The first of the ten is a portrait of Edmund Burke, described as "painted in the school of Sir J. Reynolds," price 63*l*. The largest sum, viz., 126*l*., was paid for a portrait of Warren Hastings, at the age of seventy-nine, by Sir T. Lawrence. 100*l*. each were given for a half-length of Lord Chancellor Loughborough, afterwards Earl of Rosslyn, by W. Owen, R.A; and for a life-size half-length of Nelson, by L. F. Abbott, representing the hero in naval uniform, decorated with the star of the Bath and a gold medal. A study of the head of Lord Chancellor Thurlow, "probably painted by Richard Evans, in the studio of Sir T. Lawrence," cost 15 guineas. This study is unfinished, but shows great power; the shadows are very strong. The same sum was paid for a plaster cast by Brucciani, of the gilt-metal effigy of Edward the Black Prince on his monument in Canterbury Cathedral,—a half-length figure in full armour. Similar casts by the same artist of elaborate effigies of Henry IV. and his second wife, Queen Joan of Navarre, also from Canterbury, were purchased for 7*l*. 17s. 6d. each. These three casts have been entrusted to Messrs. Elkington, of Birmingham, for the purpose of having them converted into bronze by the electrotyping process. A bust portrait of John Zoffany, R.A. (1733-1810), painted by himself, and dated 1761, cost 50*l*.; and a similar portrait of Miss Mary Russell Mitford, the authoress, by John Lucas, was purchased for ten guineas.

The trustees also report that a complete set of the bronze medals issued by the Art-Union of London, exhibiting profile portraits of twenty-one British artists, was presented by the Council in February last.

Want of space is the great drawback to the present gallery, and the trustees strongly urge that an extension of the gallery should be sanctioned.

THE PROPOSED NEW LIVERPOOL WATER SUPPLY.

THE Water Committee of the Liverpool Corporation have just presented their report on the proposals of Mr. Bateman, C.E., for an additional water supply for the town, particulars of which we published in last week's *Builder*. The committee state that after carefully considering Mr. Bateman's two proposals,—the one for a supply from Bleasdale and Wyredale, and the other from Ullswater Lake,—they have determined to recommend the combined Bleasdale and Wyredale schemes as those best adapted to meet the requirements of the Corporation. They state, however, that they are, nevertheless, very favourably impressed with the views expressed by Mr. Bateman as to the project for obtaining a supply from Ullswater, and they think well deserve further consideration if the council should come to the conclusion that the committee have under-estimated the wants of the district during the next thirty years, or that provision should be made for a longer period.

In conclusion the committee recommend the council to apply, in the session of 1876, for Parliamentary powers to execute the Bleasdale and Wyredale schemes, and obtain, if practicable, a long period of years for the execution of the works in connexion with the Wyredale project. The total aggregate amount required for both the new gravitation schemes proposed, and for an additional pipe line capable of conveying ten millions of gallons per day from the present works at Rivington, will be 2,615,876*l*.

PREMIUMS AWARDED BY INSTITUTION OF CIVIL ENGINEERS.

1. A Telford Medal, and a Telford Premium, to W. Hackney, B.Sc., for paper "On the Manufacture of Steel."

2. A Telford Medal, and a Telford Premium, to H. E. Jones, for paper "On the Construction of Gasworks."

3. A Telford Medal, and a Telford Premium, to A. Richardson Binnie, for paper "On the Nágpúr Waterworks."

4. A Telford Medal, and a Telford Premium, to G. F. Deacon, for paper "On the Systems of Constant and Intermittent Water Supply, and the Prevention of Waste."

5. A Telford Premium to J. Gaudard, C.E., of Lausanne, for "Notes on the Consolidation of Earthworks."

6. A Watt Medal, and the Manby Premium, to J. C. Hawkshaw, M.A., for paper "On the Construction of the Albert Dock at Kingston-upon-Hull."

7. A Telford Premium to Professor Prestwich, M.A., for paper "On the Origin of the Chesil Bank."

8. A Telford Premium to J. Timmis Smith, for paper "On Bessemer Steel Rails."

9. A Telford Premium to C. Colson, for "Details of the Working Tests and Observations on Portland Cement."

10. A Telford Premium to T. Colclough Watson, for "Description of the Use of Fascines in the Public Works of Holland."

The Council have likewise awarded prizes to various students of the Institution.

PICTURES BOUGHT FOR THE ART-UNION OF LONDON.

THE following is a list of the remaining chief prizes selected this year *:—

From the Royal Academy.—Pembroke, J. Pedder, 100*l*.; Building Houses on the Sand, R. Hume, 50*l*.; The Shot Tower, J. O'Connor, 50*l*.; A Home in Surrey, J. S. Rawle, 50*l*.; Scots Greys on the March, C. Richardson, 47*l*. 5s.; A Little Maid-of-all-work, A. Stocks, 45*l*.; Priscilla, Mrs. E. Crawford, 42*l*.; A Mountain Group, J. Henzell, 4*l*.; A Grey Evening, C. Smith, 40*l*.; "When the Kye come Hame," J. W. B. Knight, 40*l*.; A Glen on the Greta, W. H. W. Foster, 35*l*.; Expecting Friends, T. Ballard, 30*l*.; Recalling the Past, L. J. Cowen, 30*l*.; At the Brook—Summer, N. O. Lupton, 30*l*.; Entrance to the Close, Eversham, W. Callon, 25*l*.; River Ewe, Rossshire, J. Maculloch, 25*l*.; St. Asaph, North Wales, from the Ebury Meadows, M. P. Houghton, 20*l*.; A Farmyard, A. J. Stark, 20*l*.

From the Society of British Artists.—At Wargrave, on the Thames, W. H. Foster, 100*l*.; Evening in Autumn, G. Lucas, 75*l*.; Above the Miner's Bridge, North Wales, E. A. Pettitt, 75*l*.; Highland Cattle and Sheep, near Loch Linnhe, C. Jones, 60*l*.; A Mess of Porridge, E. J. Cobbett, 50*l*.; Left in Charge, A. Corbould, 50*l*.; A Yorkshire Stream, E. Holmes, 50*l*.; On the Medway,—Morning, T. F. Wainewright, 50*l*.; Lady Betty at Home, Mrs. Charretie, 45*l*.; The Fern Gatherer, E. J. Cobbett, 45*l*.; Night on the Bank of Loch Sligachan, A. Gilbert, 45*l*.; Looking from Denbigh's, Surrey, T. F. Wainewright, 45*l*.; Reeling up the Nets, J. W. McIntyre, 42*l*.; Clearing up, in the Meadows, W. Lucker, 41*l*.; Flower Girls of the Lagune, J. Bouvier, 40*l*.; Loch-na-Gar, from Ben-a-board Forest, A. Panton, 35*l*.; The Valley Home, T. Whittle, 35*l*.; The Merry Month of May, A. J. Woolmer, 35*l*.; Evening, Miss S. S. Warren, 31*l*. 10s.; Near Harwich—Moonlight, F. W. Meyer, 30*l*.; September on the Moors, A. B. Collier, 29*l*.; A By-lane in Berkshire, W. Gosling, 25*l*.; Morning on the Reefs, Robin Hood Bay, T. Griffiths, 25*l*.; At Fairlight, Sussex, G. A. Holmes, 25*l*.; A Morning Greeting, A. Ludovici, 25*l*.; Brigantine coming to Anchor, Caswell Bay, G. S. Walters, 25*l*.; On the Common, "Winter's Evening," G. A. Williams, 25*l*.; Free Quarters, J. Gow, 20*l*.; Through the Woods, E. Holmes, 35*l*.; A Quiet Afternoon, D. Muller, 20*l*.; A Common Friend, Miss C. M. Noble, 20*l*.; Mount Siabod, North Wales, J. Whipple, 20*l*.; Winter, G. A. Williams, 20*l*.

From the New British Institution.—Washing and Bleaching Ground, Ghent, T. O. Hume, 60*l*.; Tranquillity, W. Jay, 45*l*.; Threatening Weather at Capelbury, A. B. Collier, 30*l*.; The Last Load, J. Macpherson, 30*l*.; August, W. Jay, 25*l*.; Kingston Quay, Sussex, R. P. Nibbs, 25*l*.; The Old Mill, G. Pringle, 25*l*.; Scene from the Merchant of Venice, H. C. Selous, 25*l*.; The Extreme North Coast of Cornwall, A. B. Collier, 20*l*.

From the Crystal Palace Picture Gallery.—Morecombe Bay, J. Peel, 45*l*.; A Cat may Look at a King, J. C. Dollman, 42*l*.; Maximilian Strasse, Augsburg, H. W. Brewer, 35*l*.; Llyn-y-dines, North Wales, A. de Breanski, 35*l*.; Lugano, E. Myers, 25*l*.; Seaweed Gatherers, G. Sant, 25*l*.; The Towing-path, T. C. Swainson, 20*l*.

From the Society of Painters in Water-Colours.—A Sunset Gleam, S. P. Jackson, 37*l*.; Windsor, from Post's Walk, Eton, S. G. T. Evans, 31*l*. 10s.; Cologne: Autumn Evening, W. Callow, 30*l*.; A Likely Place, Dovedale, Collingwood Smith, 30*l*.

From the Institute of Painters in Water-Colours.—Kenilworth Castle, John Chase, 42*l*.; Glen Sligachan, Isle of Skye, James Fahey, 30*l*.; Near Dolgelly, North Wales, J. H. Mole, 25*l*.

* See p. 483, *ante*.

INSUFFICIENCY OF PROVINCIAL POST OFFICES.

THOSE men of business who are acquainted with the large structure in St. Martin's-le-Grand, and the facilities afforded at the several district post offices in the metropolis, are, when they desire to procure money orders, telegraph, register letters, or transact any postal business in provincial towns, at once struck with the imperfections and bad arrangements of the latter Government offices; and feel surprised that the "countrymen" have not moved their squeezable "M.P.s" to bring the anomaly before Parliament.

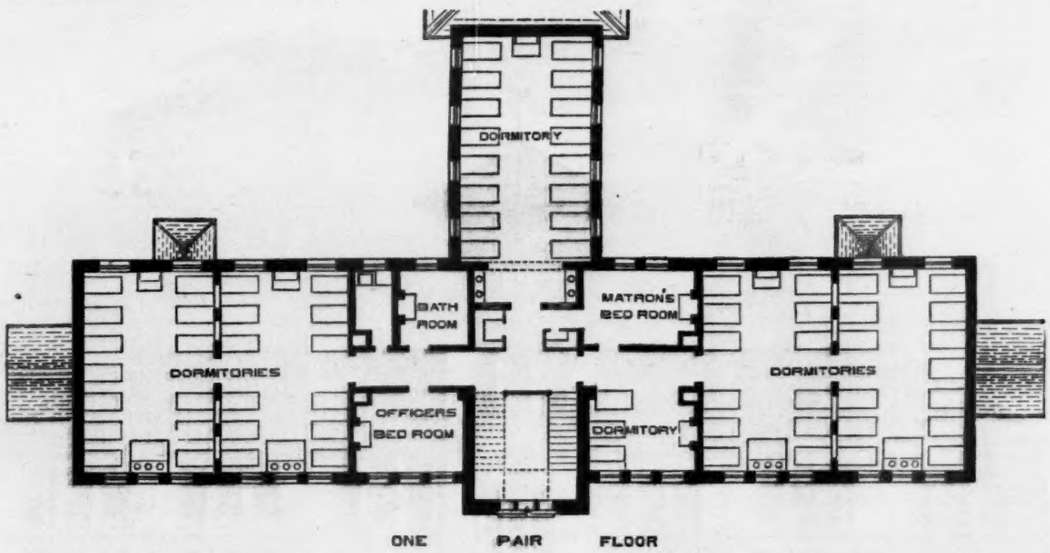
At certain hours of the day that mysterious individual, a country postmaster or mistress, may, it is true, be caught peeping through a man-hole in a contracted and ill-constructed building, but whose chief duties, in answer to the business of strangers, are to first inquire who they are and what brought them into the town.

If a stranger should have any telegraph work either as sender or receiver, particularly at election times, the very construction of the old offices affords every facility for eaves-droppers and spies; and this added to the other gossiping machinery, has enabled so many innocent M.P.s to get into the judicial election courts of inquiry, and lose their seats. The many extra duties too now imposed on county postmasters, and the large populations growing up in the immediate neighbourhoods of most towns, have in no wise been considered by the Post-master General, in regard to improving and enlarging the country post-offices; and Saturday after Saturday, when London workmen and others desire to transmit post-office orders to their families, a rush and complete block ensues, and the confusion and struggles to get to the man at the pigeon-hole are most deplorable. An inquiry on the subject is called for.

MORE NEW BUILDINGS ON THE DULWICH COLLEGE ESTATE.

A CONSIDERABLE outlay will shortly be incurred in the erection of new mansions and other houses on that part of the Dulwich College estates known as Lordship-lane, where building on an extensive scale has for some time been in progress. The governors of the College, in accordance with directions from the Charity Commissioners, have just given notice of their intention to grant building leases, for the term of eighty-four years, of two pieces of land abutting on Thurlow Park-road, the one having a frontage to the road of 33 ft., and the other of 31 ft. The annual ground-rent in both cases is 75*l*. 15s. 4d., and the lessees of each plot are to expend not less than 5,000*l*. on the buildings to be erected upon them. In addition to the above they are also about to grant similar building leases of a large plot of land on the west side of Lordship-lane, having a frontage of 1,200 ft. to the site of a new private road which is about to be constructed. This spacious area will admit of the erection of several blocks of houses. The annual ground-rent is to be 307*l*. 10s., and the sum to be expended in buildings is 28,800*l*. The completion of these leases will add to the estate an annual income of 459*l*. 0s. 8d., whilst the aggregate amount to be expended in buildings is 38,800*l*.

Excursion of the Norfolk Archæological Society.—Some members of the Norfolk and Norwich Archæological Society, under the guidance of the Rev. C. R. Manning and Mr. Fitch, hon. secretaries, have had an excursion to Tibenham, Gissing, Tivetshall, and the Pulhams. Starting from Tivetshall station in vehicles sent from Diss, the party proceeded to Tibenham Church, which is of the Decorated period. Anciently there was a chapel dedicated to the Virgin, standing by itself in the churchyard, to the east of the chancel, the remains of which are still to be seen. Under the guidance of the Rev. T. W. Thompson, they next visited the old moated Elizabethan Manor House, Channon's Hall. Its walls are 2 ft. 2 in. thick, and when, in the time of George III., it was sought to pull down a portion of the building to make alterations, it was found impossible to do so without blasting with gunpowder. Proceeding to Gissing Church, which has a Norman tower and doorways, and is a very ancient structure, and thence to Pulham St. Mary (on which latter church the Rev. C. R. Manning read a paper), the excursionists returned to Tivetshall, and dined at the Station Hotel.



METROPOLITAN CONVALESCENT INSTITUTION: HOME FOR CHILDREN, AT NORBITON.

STRUCTURAL DANGERS.

FOR some time past death has hung over the passers by in Little Russell-street. At three o'clock in the morning of Sunday last the stone entablature surmounting the colonnade on the northern side of Drury-lane Theatre, about 230 ft. in extent, fell to the ground with a mighty crash, startling the sleepers around, and blocking up the roadway. If it had happened in the day time or evening, the results must have been very serious. The accident has been ascribed to a storm of wind and rain, but it is evident that the stone-work has been waiting to fall for some time. The interspaces are spanned by slight bow-string girders of iron, with brickwork, and the heavy stone work, including a projecting cornice, was stuck on to the front of these in the most insecure manner.

Neither this colonnade nor the entrance portico is shown in the views of the theatre given in Britton's "Public Buildings of London," published in 1825. The addition of the portico in Brydges-street, which was built by Sir Morton, then Mr. Peto, from the design of Mr. S. Beazley, is mentioned in the letterpress; and the colonnade was put up some time after. If the imminent peril to which we are exposed by bad building were fully realised, we should scarcely be able to walk about without fear. The sword of Damocles is still hanging.

METROPOLITAN CONVALESCENT INSTITUTION.

HOME FOR CHILDREN, AT NORBITON.

ON Monday last, their Royal Highnesses the Prince and Princess of Wales formally opened this building, which has been erected at Kingston-hill by the Convalescent Institution, for the reception of the male and female children who, till now, for want of funds, have been located in two old and ill-adapted houses at Mitcham and Hendon.

It has been endeavoured by the architect, Mr. H. Saxon Snell, to carry out the instructions given to him by the Committee, that no expense should be incurred for either internal or external decorative features. The whole of the external walls are faced with stock bricks, the roof is covered by the Broomhall Tile Company with their patent roofing-tiles, and the overhanging eaves and the upper part of the tower are of deal, stained with Stockholm tar. The necessity for the tower, which forms a prominent feature in the building, arose from a desire that a good supply of water should always be available in case of fire; consequently the cistern occupies the upper part, and pipes descend to the hose and hydrants on the staircase, from which each room could at any moment be deluged with water in case of fire. This tower also afforded the opportunity for providing for the isolation of any doubtful case of disease that might arise in the establishment, and there is consequently immediately under the cistern-chamber an infectious ward capable of holding four patients, with bath-rooms, linen-closets, and other conveniences attached. This ward is approached from the second-floor by a separate staircase.

The first and second floors of the building provide dormitory accommodation for 146 children, or 73 of each sex. The nurse's rooms are sufficiently large to accommodate an extra child in cases where it is desirable that they should be under constant supervision. In the back wards it has been necessary to place the beds along the outside walls under the windows; but in the front wards the beds are ranged down the side walls of the room, and the windows being in the front walls, the draught through the room when the windows are open, is down the passage between and across the ends of the beds. In hospital wards this would be by no means a good arrangement.

Mr. Snell asserts that this is the proper position for beds in dormitories, where the superficial or floor space is insufficient to allow of the beds standing between, and therefore not immediately under, the windows. It is only in hospitals, or other such buildings, where so large an area can be afforded. One of the main objects in planning each floor has been to secure to the children, as far as possible, the constant supervision of the matron or of the nurses, and with this view these officers' rooms are placed so as each to command by small windows a complete view of two wards. Every dormitory is fitted with four of Jennings's tip-up lavatory basins, and supplied with hot and cold water. The floors around these conveniences are paved with tiles or lead. The waste-pipes from the basins do not go directly into the drains, but their contents will be discharged into the heads of special rain-water pipes, running up the outside walls of the buildings, and all fear of foul air entering the apartment through the waste-pipes is thus obviated. Each floor has its separate bath-room paved with tiles on that description of flooring known as "Fox & Barratt's." There is also on each floor of the building a water-closet (rather too small a provision as it seems to us), and slop-sink, the construction of the coverings to which forms the subject of a patent by the architect. At the back of these conveniences, and just above the level of the seat or sink, there are large openings in the wall, about 18 in. high, and the full width of the apparatus; the lids are so contrived that when shut down the water-closet seats and pans, or the sink, are exposed to the outer air by means of the large openings in the wall, above referred to, but when the seat is lifted up, these openings are simultaneously closed, and cold air is prevented from entering the room.

The ground-floor of the buildings contains in the two side wings a day-room for each sex with porches leading to the recreation or playgrounds. External water-closets and lavatories are provided for use during the day-time. A dormitory for four cripples is provided on this floor, as also a matron's and visitors' room. The dining-room is in the centre, and at the back of the building. It adjoins the kitchen and other administrative offices.

In consequence of the fluctuating number in this institution, it has been thought desirable to provide two ranges for this kitchen, and for the same reason, although one of these ranges an ordinary occasions heats all the water for the baths and lavatories, it is supplemented by a separate heating-furnace to be used when the establishment has its full numbers.

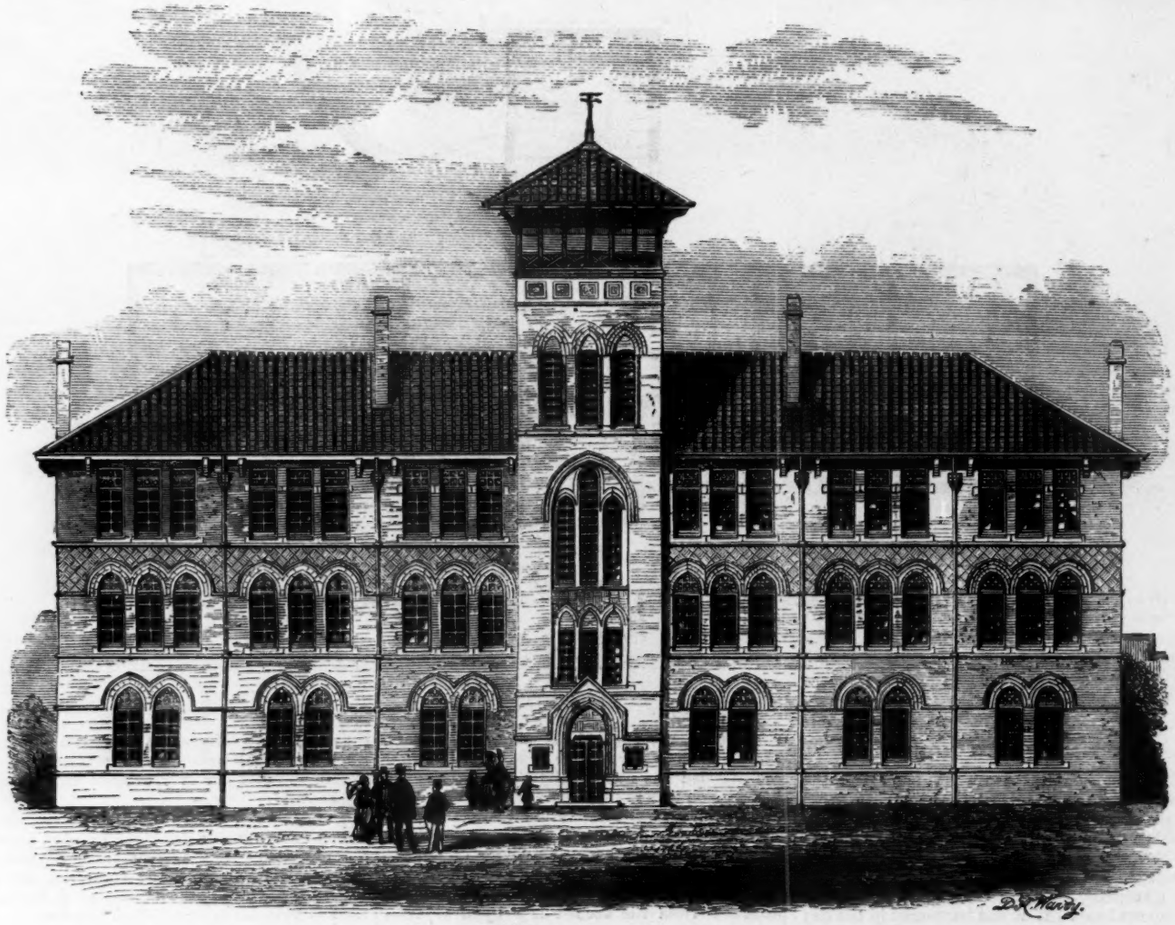
The ventilation of the building is generally effected by natural means, the walls are hollow, and being in all cases 18 in. thick, contain flues 14 in. by 9 in., wherever it is practicable to place them. In addition to this the dormitories and day-rooms are ventilated by special shafts which contain the hot-water circulation pipes running to and from the kitchen range and furnace. These heated pipes by rarifying the air in the shafts cause it to rise and so displace the foul air of the wards in communication with them.

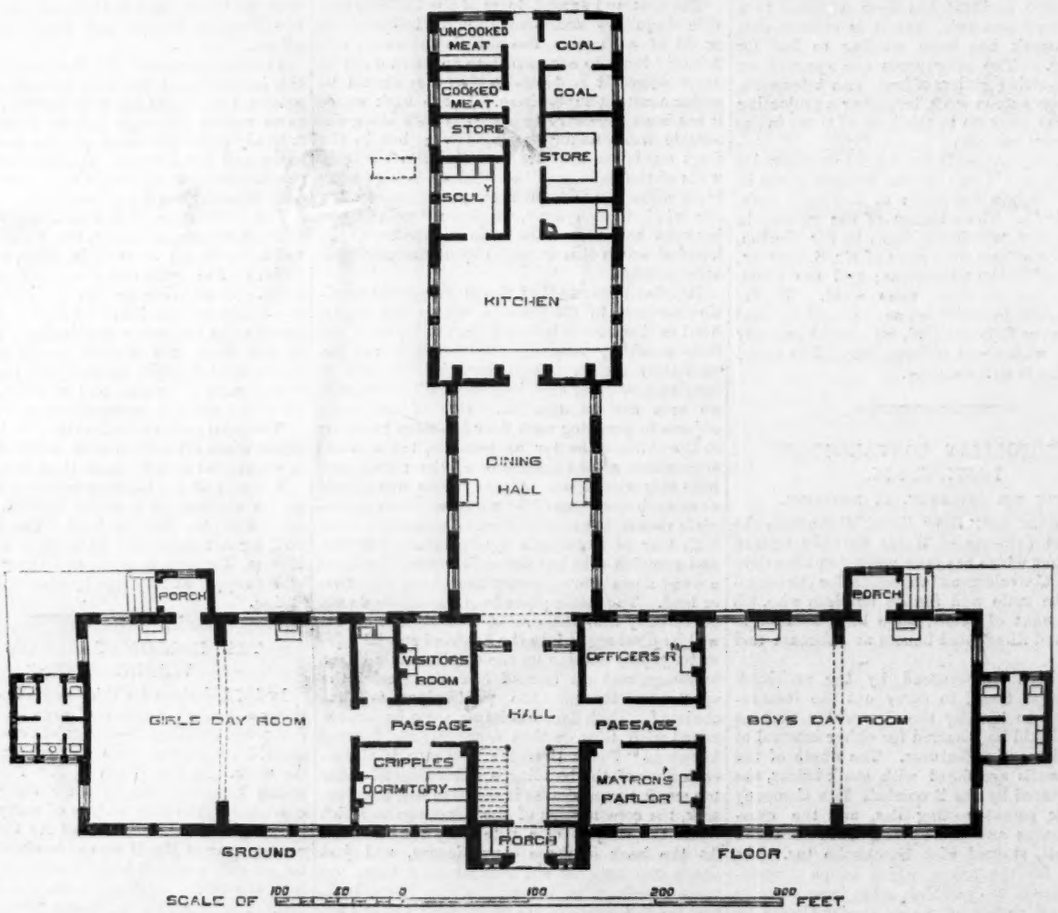
The total accommodation is for 150, and the cubic space allowed to each is 750 ft., but there is superficial area for more than this number.

The cost of the building with the fencing and all its accessories is about 10,000*l*. The contractor is Mr. George Wall. The heating and cooking arrangements have been executed by Messrs. Benham & Sons, and the gas and cold water supply and fittings by Messrs. Z. D. Berry & Son.

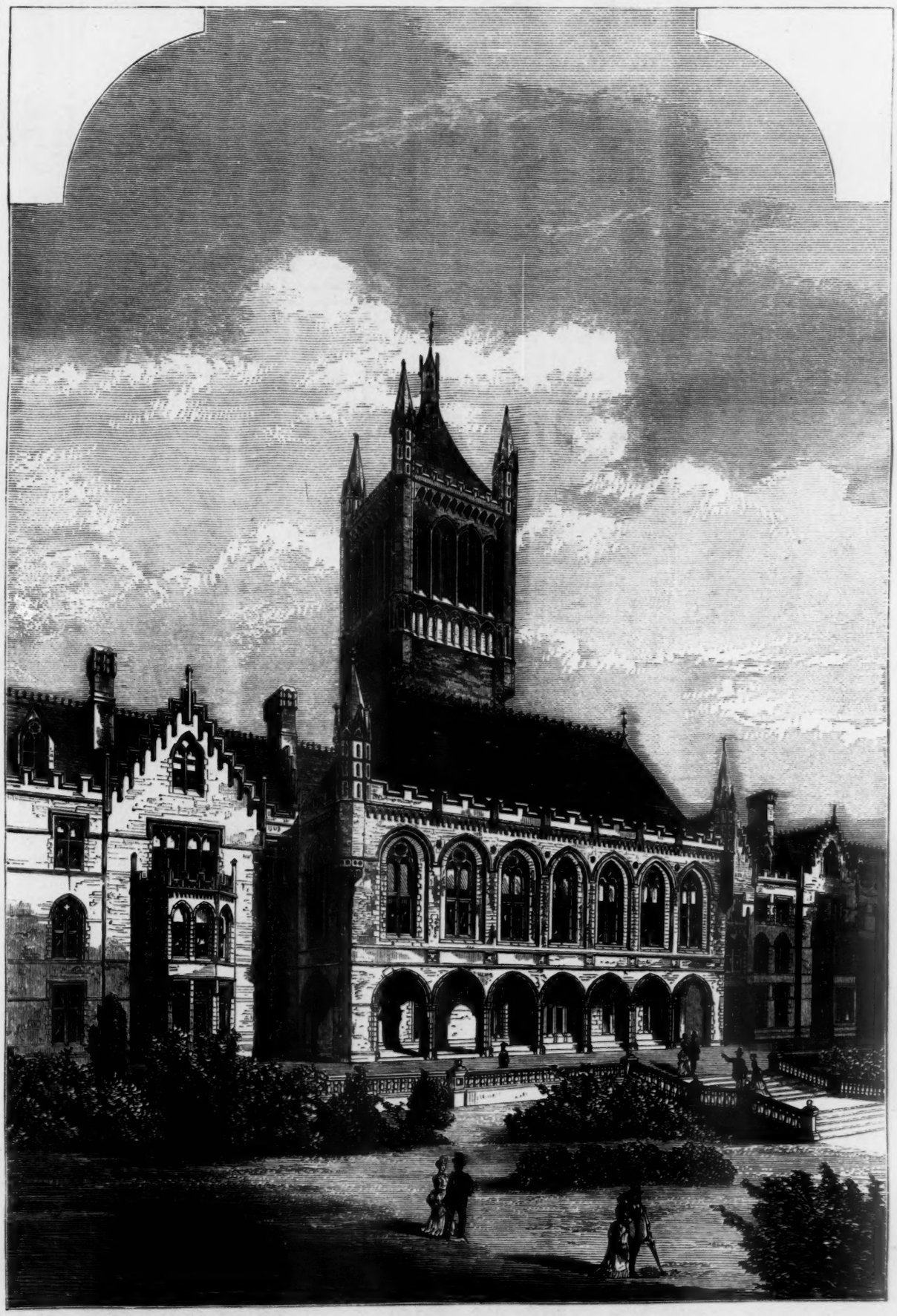
THE HOLLOWAY SANATORIUM, VIRGINIA WATER.

IN 1873, designs for this Institution were sent in by a limited number of architects, and the first premium fell to the design of Crossland, Salomons, & Jones, who were entrusted to carry out the work. At the death of Mr. Philpot Jones, which happened shortly after the works had commenced, the sole charge of carrying on the building fell into the hands of Mr. Crossland. In consequence of Mr. Holloway having substituted for cut and moulded brick Portland stone dressings, the design originally made had to be modified. The building is being carried out on a schedule of prices, by Messrs. Sharpington & Cole, and Mr. Lascelles; Mr. Featherstone and Mr. Perry Featherstone acting as clerks of works.

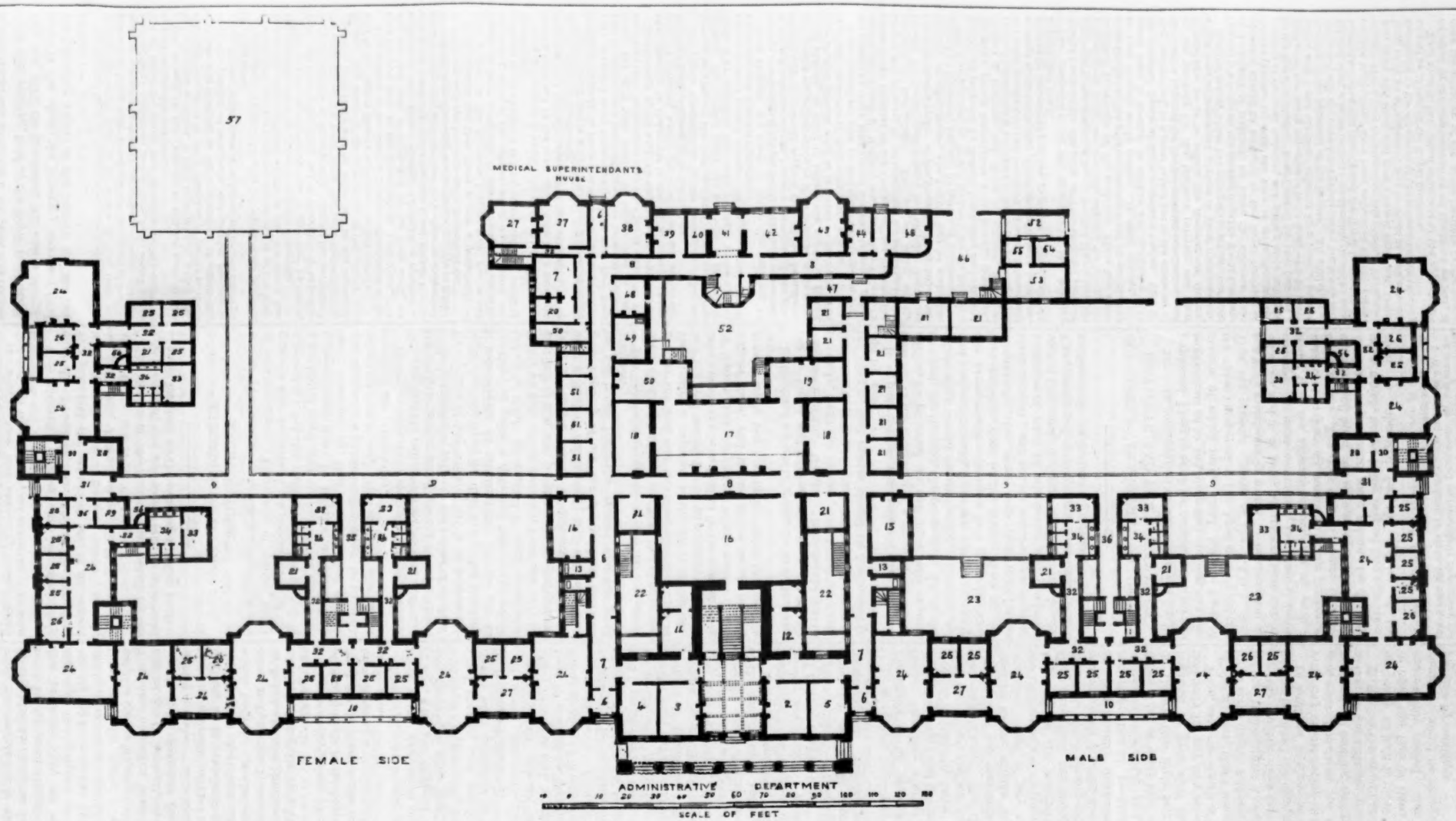




METROPOLITAN CONVALESCENT INSTITUTION: HOME FOR CHILDREN, AT NORBITON.
MR. H. SAXON SNELL, ARCHITECT.



THE HOLLOWAY SANATORIUM, VIRGINIA WATER, WINDSOR.—MR. CROSSLAND, ARCHITECT.



1. Colonnade.
2. Friends visiting male patients.
3. Friends visiting female patients.
4. Assistant medical officer.
5. Assist. med. officer's bed-room.
6. Porch.
7. Vestibule.
8. Corridor.
9. Connecting passage.
10. Verandah.
11. Head female attendant.
12. Head male attendant.
13. Head attendant's store.
14. Female attendant's dining-room.
15. Male attendant's dining-room.
16. Dining-hall.
17. Kitchen.
18. Serving-room.
19. Servants' hall.
20. Scullery.
21. Store.
22. Area.
23. Terrace.
24. Day-room.
25. Single room.
26. Attendant.
27. Library.
28. Padded room.
29. Half-padded room.
30. Ante.
31. Lobby.
32. Passage.
33. Bath-room.
34. Lavatory, &c.
35. Passage to first and second-class wards.
36. Passage to billiard-room from first and second class wards.
37. Dining-room.
38. Drawing-room.
39. Doctor's room.
40. Porter.
41. Entrance-hall.
42. Visitors.
43. Housekeeper's room.
44. Office.
45. Steward's store.
46. Steward's yard.
47. Cart entrance.
48. Surgery.
49. Bread-store.
50. Pantry.
51. Workshop.
52. Yard.
53. Post-mortem room.
54. Dead-house (male).
55. Dead-house (female).
56. Dust.
57. Laundry buildings.

THE HOLLOWAY SANATORIUM, VIRGINIA WATER.—*Plan.*

ANNUAL GENERAL MEETING OF THE MANCHESTER SOCIETY OF ARCHITECTS.

At this meeting, held at the Royal Institution, July 5th, 1875, the president, Mr. James Murgatroyd in the chair, the honorary secretary read the following report of the Council for the last session :—

The Council have to congratulate the Society on completing the tenth year of its existence, and they are pleased at being able to report that its sphere of usefulness as a society is steadily increasing. During the last session, three additional names have been added to the list of members, which now numbers twenty-eight, as against twenty-five last year.

The income of the Society, as will be seen by the balance-sheet attached, is fully appropriated, a very considerable portion of it being awarded in prizes to those who are now studying in the expectation of succeeding us in the practice of architects, and another portion in prizes for the furtherance of technical education amongst the workmen.

The Council is glad to be able to report some progress in connexion with the proposed consideration of the Manchester Building Bye-laws, which, as you are aware, has engaged the attention of the Society for some time.

This is not a matter which can in any way be forced upon the City authorities, and it therefore of necessity requires time for its development. During the last session the attention of the town clerk has been directed to this question, both orally and by letter, and he has expressed himself fully aware of the importance of the subject, and also of the papers already submitted by this Society.

At a meeting of the General Purposes Committee of the City Council held at the Town-hall on April 4 last, "It was resolved that, as suggested by the town clerk, an epitome of the clauses relating to building operations which are contained in the various Local Acts of Parliament be prepared, and that the town clerk be authorised to take the steps necessary and incur any expense required to carry out such resolution as early as practicable."

Your Council feel that there is now a probability of their labours in this direction bearing fruit, and would suggest to their successors in office the desirableness of not losing sight of the subject, which is of so much importance to all who are in any way connected with building operations.

From the manner in which your Council have from time to time been met by the town clerk, they have no doubt whatever that he fully appreciates the assistance which can be given by this Society.

Your Council have in several instances forwarded copies of the memoranda in connexion with competition (which were arranged some time since), where they have been able to obtain early information of the intended competitions, and they have reason to believe that in some instances their suggestions have been found useful.

The Council would urge all members both by example and influence to endeavour to check responses to invitations to compete, where the conditions are materially different to those drawn up by this Society.

The Pupils' Competition for the Society Prize has not been so satisfactory this year as your Council would have wished. The subject given was a design in the Classic Style of Architecture, the study of which seems to have almost entirely ceased amongst the pupils, three only of whom responded to the invitation.

Your Council are sorry to notice the tendency to indulge in sensational design, more particularly on account of its evil influence on the younger members of the profession, and they would suggest that efforts be made to carry out a suggestiou made by the President in his inaugural address, in order to induce the pupils to extend their studies beyond what is required to enable them to just fulfil the duties of their employers' offices.

Your Council are glad to find that in this opinion they are upheld by other members of the Society, more particularly Mr. James P. Holden, who has kindly offered to place at the disposal of the Council of the Society the sum of five guineas, to be competed for annually by the students in Manchester. The subject being strictly limited to Classic architecture, but all other conditions being in the discretion of the Council. They hope that by this, or other means, the Society may be enabled to extend its influence, and also its sphere of usefulness.

The drawings sent in by the students for the Society's prize were prepared by Messrs. Pendleton, Sussum, and Yabsley, pupils respectively with Messrs. Pinchbeck, Wilson & Oldham, and Royle & Bennett, and your Council considered it advisable to divide the prize amongst the three youths who had ventured to come forward and attempt to deal with that which seems to have been considered by the majority of the pupils as a thing entirely beyond their reach.

The competition by the members of the Building Trades Institute for the prize of Two Guineas, given by the Society, was competed for on the 23rd March last, the subject given being one specially adapted for testing the technical knowledge of the students. There was a fair attendance, but the productions were not so satisfactory as your Council would desire. In their opinion, too much time is devoted to studies not connected with the practical details of their respective trades. This is, they understand, to a great extent due to the character of the studies required for the Government examination, and to the necessity for the teachers carrying out their instructions so as to obtain the Government Grants, which form an important portion of their remuneration.

Another matter which has engaged the attention of your Council is a proposal (emanating from the Royal Institute of Architects of Ireland), by which the different local societies should be affiliated to the Royal Institute of British Architects, with the view of strengthening the position of the local societies, and adding some influence to the Royal Institute. Your Council felt that this was a matter of too much importance to be dealt with by them alone, and it was therefore referred to a special general meeting of the members of the Society. An affiliation as suggested was not considered practicable; but it was considered that a more intimate relationship should be established between this Society and the Royal Institute, and certain suggestions have been submitted to the parent Society with a view to promoting this result. The matter now rests with them, and your Council hope that, before long, such an arrangement may be made as shall conduce materially to the extension of the influence of this Society as well as of that of the Royal Institute.

Your Council have taken advantage of the opportunity afforded by the communication on the above subject, to draw the attention of the Royal Institute to the recent competition of terms for the proposed works at Sheffield, in which some members of the Institute, in their opinion, figure more prominently than creditably.

The accounts have been audited by Messrs. Henry Bridgford and Wm. A. Royle, and an abstract of the same is appended.

The following officers were declared duly elected :—President, Mr. Thos. Worthington; vice-president (by seniority), Mr. E. Salomons; hon. secretary, Mr. J. Holden; council, Messrs. W. R. Corson, J. Murgatroyd, G. T. Redmayne, W. A. Royle, and J. M. Taylor.

The thanks of the Society were voted to the late president, and also to the hon. secretary and council, for their services during the last year.

"SUBORDINATE TO THE ARCHITECTURE."

SIR,—The above expression is a fruitful source of misconception. There are, of course, many painters who understand the precise value of the expression; but the public, as a rule, take it in a too literal sense, and come to think that what is subordinate must be inferior to the architecture: consequently, that the historical painter who decorates a public edifice must be subordinate to the architect. This is one of the vulgar errors of the present day.

The expression really means nothing more than this, viz., that the painter's work, as well as that of the sculptor and architect, should be subordinate to the principles of art,—to the ruling of wisdom. To say that of any work of art is to bestow the highest praise upon it. But to say that painting is subordinate to architecture, or one art to another, is quite a different thing, and would betray a total ignorance of first principles. When we talk about mastery, that can only be ascribed to him who possesses the largest general powers,—to the master of that art which is the most difficult of attainment; and the most complete mastery of art has always been ascribed to the great historical painter and the great sculptor.

The specious argument which is commonly used, that the building contains the picture, the greater the less, and therefore that the artist of the greater is superior to the artist of the less, will not hold water. The earth contains man; but man has always been held to be the noblest work of Nature, and the painter who is master of the human form, and treats of the human nature, always holds the first rank,—takes the lead in art.

In England we would appear to be endeavouring to invert and subvert the true order and succession in art. We would conform the soul to the body, build the carcass, and then think about the thought it is to house. Whereas the higher teaching is, that matter should be conformed to and by mind.

It is pictorial art which should have the precedence in the designing of a great monumental edifice, for pictorial art can more fully express the soul, the thought, the purpose to which the whole work should be conformed. Pictorial art and sculpture should, therefore, occupy precisely the same relative position in a great building that the brain does to the body. With us, unfortunately, the more important work is an after-thought; and yet we wonder that flagrant instances of want of adaptation and congruity should frequently disfigure architectural design. The painter and sculptor must dominate before architecture can become a great art.*

W. C. T.

SUGGESTED AMALGAMATION OF THE INSTITUTE AND THE ASSOCIATION.

SIR,—In continuation of the letter you kindly published, I beg to send for consideration several suggestions as to the proposed society, the discussion of which may, I think, help to forward the union mentioned at the head of this letter.† That the present system of the R.I.B.A. does not work satisfactorily seems to be conceded on all sides, and it is here, therefore, that our reconstruction must commence, the general desire being that the alterations shall be of such a nature as to draw all members of the profession to its ranks. The only way to secure that the change shall be of the nature required is for the Institute to propound some scheme for the purpose, which, before being carried into execution, shall be submitted for the opinion of the "kindred societies" in Town and country, and the additions necessary to meet their views being incorporated in it, we have the foundation upon which to erect an Institution which shall really be representative of the British architects. But in doing this, we must not forget that although the purpose of the new society is exactly set forth in the charter, and the first of the bye-laws of the present one, yet, as alterations must be made, it will be necessary to petition for her Majesty's sanction to the changes. The name has often been objected to as being too long. It is worth considering whether it could not be shortened (as it usually is by outsiders) to the "Architectural Institute," or something similar, of two words at most.

Then, as to membership, we have mostly to consult the Architectural Association, from which body by far the greatest number would come, and principally into the grades now known as Associates and Students. Let us retain the names, but slightly vary the manner somewhat as follows:—

Fellows.—Architects in practice, who, when proposed, shall have been engaged (as principals) for at least seven consecutive years, and have acquired a considerable degree of eminence in the same.

Associates.—Architects in practice for less than seven years, gentlemen over twenty-five years of age, who are engaged in the study of civil architecture, or other gentlemen not necessarily architects by profession, but whose pursuits are allied thereto, and are therefore qualified to concur with architects in the advancement of professional knowledge.

Honorary Members.—Such persons of distinction in art, science, literature, &c., as are likely to concur with architects in the advancement of professional knowledge. Not more than five to be elected in one year.

Candidates for Election as Fellows or Hon. Members to be recommended to the Council by at least five Fellows from personal knowledge, and if passed by the Council, balloted for as may be arranged. Associates to be elected in a similar way, but may be recommended by either Fellows or Associates. Students to be recommended by at least three members of the society (not hon. members), and voted or balloted for by the students as a report to the Council, who will have the power of admission. Present members of the Architectural Association to be considered as admitted students; those qualified to be Associates to be eligible for the ballot without further nomination. Present members of the R.I.B.A. to rank as now.

Subscriptions. — Students, half-a-guinea entrance-fee, and a like amount annually. Hon. members, nil. Fellows and Associates, as at present.

As to Officers, &c.—The President and Vice-Presidents to be elected from the Fellows. Senior Secretary also to be a Fellow. The Junior Secretary and Librarian to be paid officers, elected, if possible, from the Associates for at least two years, and not necessarily to resign on becoming Fellows. The Council or Committee to consist of ten members, chosen as follows, in addition to the officers and ex-officio the representative officer of any special department of the Institution's work (such as a Class of Design, &c). Of the ten members, four to be Fellows, three Associates, two Students, and one Honorary Member. Such arrangements as these would of course greatly diminish the power of the Fellows, and in a manner unknown, I believe, in similar societies; but at present they have absolute control of everything, and, it is admitted, have fallen short of what was required and expected of them; this little sacrifice therefore seems required to give that material confidence so necessary for any new relationship.

Then, as to the means of furthering the objects of the alliance, this I imagine will best be done by in some degree following the line marked out by the Architectural Association, and intensifying the various departments, a sub-committee having (as now) the charge of each.

In addition to these would be considered the propriety of instituting periodical lectures upon professional matters not touched by the other sections, all tending and pointing to the examination as the ultimate aim and object.

To further the examination itself it might then be policy to hold it yearly, and for the Society to bear the fees of those of its students who successfully passed; even those who were unsuccessful might be charged but half what was payable by outsiders.

Students passing might also by so doing be-

* Some of our correspondents will doubtless reply to W. C. T. on this point.

† We allow our correspondent to state his views, but we must not be considered as necessarily supporting the proposed amalgamation.

come Associates without payment of the "admission fee."

Among other things the Council would have continually under their notice all matters (public or otherwise) in any way affecting the interests of the profession, and by acquiring the representative status it does not at present possess, the Institute might and no doubt would become the recognised place for the redress of professional wrongs.

Some may say,—Where is the money to come from for all this? But I venture to think if reforms were made the income would largely exceed the present one, and then gradually get larger still; meanwhile the funded property, which seems to be accumulated for no one seems exactly to know what purpose, might help the lame dog over the stile which prevents him reaching the meat he craves.

Time will not permit me to say more now, but I think enough has been suggested to call forth expressions of opinion for and against. Anyhow, if sufficient has been done to call attention to the matter in such a manner that something, some change, some good may take effect from (let us say) the next conference, my object has been obtained.

R. E. P.

TRADE DISPUTES.

Leslie. — The Leslie masons have struck work in consequence of the refusal of the masters to grant a rise of ½d. per hour on their wages.

Markinch.—The strike of the Markinch masons has terminated, the masters agreeing to grant the demands of their men.

Edinburgh.—A meeting of Edinburgh and Leith operative plumbers was held last week in the Hall, Jackson's-close, in order to give in reports as to the dispute between them and their employers in reference to the by-laws of the trade. One hundred and eighteen men intimated that they had struck work, and a number reported that they had given in their warning. It was ascertained also that six employers had signed the by-laws as approved by the men, and that thirteen masters, employing eighty men, approved of the by-laws, although they had not yet signed. A motion was unanimously adopted that no opportunity be lost of negotiating with the other employers so as to bring about an amicable settlement of the dispute. Later in the evening a number of the men on strike applied for and received travelling cards to enable them to seek employment in England.——A meeting of the master plumbers of Edinburgh and Leith was also held with reference to the strike which has taken place, Mr. Barton presiding. The secretary read the report of the committee appointed to communicate with the operatives, in which it was stated that a letter had been received from the latter requesting that a deputation of the masters should wait upon them with a view to the settlement of the dispute. The committee, however, being of opinion that former deputations had proved most unsatisfactory, had refused to meet with the men. Some conversation having taken place on the present position of affairs, the following motion was unanimously agreed to:—"That this meeting, after hearing the report of the committee appointed to communicate with the men, and while deploring the attitude which has been assumed by them, does not see its way to make any further concessions, and pledges itself to resist to the utmost the unreasonable demands of the workmen."

Bolton.—The strike of carpenters and joiners at Bolton is at length terminated, the masters having agreed to give the men an advance of 2s. now, with a copy of working rules; a further advance of 1s. 6d. on the 1st of February next, and a reduction in time of half an hour a day for five days in the week, commencing in May next. The men agreed to these proposals, on the understanding that, for all future advances, three months' notice shall be given instead of six.

Bath.—The operative carpenters and joiners of Bath, to the number of 300, have struck work for an increase of pay. The masters have declined arbitration.

Burnley.—Four masters and four workmen met at the Swan Hotel, Burnley, on Tuesday night, to see if terms could be agreed upon so as to prevent a strike. The men now work fifty-four hours per week, and their wages are 30s. per week. They ask for a reduction of five hours, or to forty-nine hours per week, and an advance in their wages to 7½d. per hour, or 30s. 4½d. per week. After a long conference, it was agreed that the working hours shall be fifty-two per week, and the wages 7½d. per hour, or 32s. 6d. per week. The strike will, therefore, be averted.

Birkenhead.—An arrangement has been come to between the journeymen carpenters and joiners of Birkenhead and their employers, by which the strike, which was threatened to take place on the 1st of next month, will be averted. The men agree to a rate of pay at 7¾d. per hour, with a modification of the existing arrangements as to walking time. In future two hours' notice of leaving will be required on either side; and a code of rules has been drawn up and mutually assented to which will be the basis of negotiation in case of any future dispute in the trade.

Bristol.—The Rev. Prebendary Percival, master of Clifton College, to whom was referred for abitration the application of the builders' labourers of Bristol for an advance of wages, has decided that the rate of 4½d. per hour, which was paid last winter for the four winter months, be adopted as the rate all the year round. This is an advance of ½d. per hour upon the summer wages. The award is to last for twelve months.

IMPROVEMENT OF WASTE LANDS.

AN experiment, attended with gratifying results, has been tried in Cornwall, where upwards of 200 acres of the Connor Downs have been reclaimed by the Cornish miners. The land was leased to the men for ninety-nine years at a yearly rent of half-a-crown an acre, quite as much, if not more, than the property had formerly brought in to the owner. The size of the holdings varied from three to ten acres, and by degrees the workmen have transformed what was before nothing better than waste common land into a thriving and pleasant garden. Most of the miners have built houses and outbuildings for themselves on the plots, and nearly all are prospering, happy, and contented. The land has been tilled by the spade, after mine hours were over, and sand and sea-weed have been found to act as a capital manure. Wheat and potatoes are the principal crop, but all vegetables are grown.

Nearly every leaseholder keeps a cow and a pig, whilst a few keep a pony or donkey and cart. The experiment has operated most beneficially in improving the status and the health and morals of the miners.

It is now suggested that the great mine and land owners in the north of England should follow this excellent example, as there are thousands of acres of poor and unprofitable land on and about the surface of mines; and the steady workman once transformed into a leaseholder, with a house and land of his own, would become a happy, clean, and sober man.

THE DUOMO OF FLORENCE.

SIR,—I must own that I have never been more surprised in my life, when reading criticisms on buildings, than by the eulogy of your correspondent "S. D." upon the Cathedral of Sta. Maria del Fiore in your last number. I am well acquainted with it, having carefully for some days studied the masterly construction of the brick cupola with the late L. Vulliamy in 1818. Externally this rises with majestic dignity above the other edifices of the City, and its graceful outline is very pleasing in the contour and general proportions. The impressions produced upon my mind fifty-seven years ago remain the same, although I have frequently visited it of late years; and I quite agree with Mr. Fergusson in his "Christian Architecture," that, despite the ability of the general disposition of the plan, the effect of the interior "is utterly thrown away in the execution. The details are positively ugly. The windows of the side aisles small and misplaced, those of the clearstory mere circular holes. The proportion of the aisles one to another is bad, the vaults ill-formed, and altogether a colder (gloomier) and less effective design was not produced in the Middle Ages. The triapsal choir is not so objectionable as the nave; but there are large plain spaces that now look cold and flat; the windows are too small, and there is a (deadly) gloom about the whole which is very unsatisfactory."

To my mind, the exterior is as unsatisfactory as the interior. The surface of the walls is covered with panels of flat marble work, designed by an inlaying joiner as for a marquetry table, and executed by the marble mason without relief and with no sentiment for contrast in colour. The conception of the artist is nowhere perceptible, except in some of the lateral porches, which are very pretty as cabinet work. With these latter exceptions, there is neither grandeur, grace, nor propriety in the decoration.

T. L. D.

THE PATENT LAWS.

ON the 28th ult. a meeting of the members of the Institution of Mechanical Engineers was held at the Institution of Civil Engineers, Great George-street, to take into consideration the Patents for Inventions Bill, proposed by the Lord Chancellor. The chair was taken by Mr. F. J. Bramwell, president of the Institution. In the course of the proceedings it was resolved,—

"That this meeting is decidedly of opinion that the Patents for Inventions Bill, 1875, proposed by the Lord Chancellor, would be much worse in its operation than the Act of 1852, for the following reasons among others:—It would give unlimited power to the Lord Chancellor to stop all patents, as well as to control the length of patents, and the terms on which they should be used, to a large extent. It would not appoint paid commissioners to manage the office; it would abolish the provisional specification; and it would appoint irresponsible examiners, who would have the power of reporting against the applications for patents on grounds of which they frequently could not possibly judge."

Mr. William Smith proposed,—

"That this meeting is of opinion that many of the provisions contained in the Lord Chancellor's Bill are contrary to public policy and an interference with the admitted rights of inventors and others connected with property in invention."

Mr. W. E. Newton seconded the resolution, which was carried unanimously.

BRIDGE BUILDING IN AMERICA.

THE State authorities of the United States, it appears, erect bridges, and charge the cost to the persons interested. This paternal solicitude is to provide that all bridges are secure and safe for travelling over.

A sample of this State bridge-building is now to be seen a few miles above the State capital over the Erie Canal, which bridge has caved in with a two-horse wagon, drowning driver as well. The bridge had been recently constructed of iron, stone, brick, and wood, of the best kind; and a day has been set apart for the President and the authorities to inspect the stoppage of canal traffic.

HOW CHURCHES ARE MADE REMUNERATIVE IN AMERICA.

OF late years the rise in value of house property in New York has been very great, but the value of church property in "pews" has increased in a still higher ratio.

A costly church has lately been erected for the Presbyterians in one of the most fashionable streets in New York, and the pews in it were put up to auction at the end of May. The church was thronged with bidders. The pews next the pulpit were, after a brisk competition, knocked down for 1,200*l.* each, and the most ordinary pews fetched 60*l.* each. The prices ranged between these two figures, and in addition 40*l.* to 50*l.* premium was paid for choice of seats. One hundred and fifty-five of the pews, with premium, sold at 75,000*l.*, and the total amount realised by the sale was about 160,000*l.*, sufficient, with 40,000*l.* raised by free gifts, to pay the whole cost of building the church. The pew-holders are also assessed 6 per cent. annually for their sittings, which will give an annual revenue of 9,800*l.* for the minister! What should an archbishop get at this rate?

THE INDIA MUSEUM.

IN your remarks, published June 12th, on the New India Museum, South Kensington, you say a "somewhat detailed introduction may be of material service to those of our readers who visit, as we strongly recommend them to do, the spot." Induced by your recommendation, I made a short *détour* to learn the times and prices of admission, but was disappointed when I found the uniform time of closing is six p.m.

Your periodical, being the great instructor of the building trades,—for we find it in the Club and Institute Rooms, in the coffee-house, and often in the public-house,—ought, I think, to urge the authorities to keep open the museum for inspection at least twice a week (Monday and Saturday) until ten o'clock p.m., like the South Kensington general collection and picture galleries. If the collection is for the many, and especially for those who may carry out and utilise some of the ideas gained therein, can it be right to shut out ninety-and-nine of every one hundred, for probably at least that proportion are debarred viewing it, not being able to lose a day's, or even half a day's, wages? Opening it on certain week evenings might keep many from the beer-shop. Some may say, Why not go on Saturday? But after taking home the wage and washing, what time is left before six o'clock?

J. CHERTIEN.

RIGHT OF WORKMEN TO SUMMARY JUDGMENT FOR WAGES ON A BANKRUPT'S ESTATE.

IN the Durham county police-court, a very important question arose in respect to bankrupts under the Master and Servant Act, and, as one of the first decided, it deserves attention.

Messrs. John & Henry Pringle were summoned, at the instance of five of their late workmen,—Fenwick, Newton, Hall, Green, and Ward,—for the nonpayment of wages due to them under contract, they not having received a fortnight's notice to leave work, as stipulated when their engagement was entered upon.

The complaint was not denied; but counsel for the defence contended that, when an estate became bankrupt, workmen were placed on the same footing as other creditors, and could not take summary proceedings in county or police courts to recover wages owing, and as the defendants were adjudicated bankrupts, their old hands could not enforce payment for wages. It was true that when the men were engaged an arrangement was entered into that a fortnight's notice would be required on either side to terminate the contract. That the trustees of the estate would be acting illegally were they to pay these claims, and it might be there were not sufficient claims to meet the order.

Counsel for the men urged that a magistrate had power to enforce the payment of men's wages under any circumstances. That, in the present case, the agreement and wages had accrued before the bankruptcy was *Gazetted*.

The bench were clearly of opinion that the bankruptcy proceedings did not operate as a bar to workmen's wages. The men had not sued the trustees of the bankrupts' estate, but their late masters, the bankrupts, and the wages had accrued before the defendants were declared bankrupts. They would make an order for the payment of the wages claimed, with costs, to be levied by distress on the estate, or by committal of the defendants in default.

As there are numbers of men unpaid, the decision is of consequence.

BUILDERS AND AUCTIONEERS.

BADCOCK *v.* BROOKE.

IN this case, which was heard in the Westminster County Court, the plaintiff sought to recover from the defendant the sum of 18*l.* 11s., for work and labour done, and materials supplied in fitting up his private office in his new premises, in Lupus-street, Pimlico, as well as some repairs to houses, for which, it was alleged, he was acting as agent, and from whom the plaintiff received instructions, and a charge for estimating, &c., for other works. The plaintiff was represented by Mr. Peckham, and defendant by Mr. Buck, barrister.

The evidence went to show that defendant, in May, 1873, entered into an arrangement with Mr. J. Redford, who carried on business as an auctioneer and house agent, to join him as a partner, on payment of certain moneys; the provisional arrangement, after a probation of three months, to be turned into a partnership; in default, the defendant to be paid 2*l.* per week for his services, and all moneys received refunded. Three weeks after this provisional arrangement Mr. Redford was taken ill and died, and the defendant without further consideration took possession of the business, and has continued it ever since. Upon his joining Redford, he gave orders to plaintiff to fit up a private room for his office, and now repudiates payment for the same, upon the plea that he was only acting as a clerk to Redford; as also the repairs to houses, which came through the office, and which work was done subsequent to Redford's death. He also demurred to a charge of one guinea for plaintiff's writing specification and making estimate for further works.

The judge, after hearing the evidence of the plaintiff, his workmen, and also that of an independent witness, said the evidence was overwhelming, gave judgment for the plaintiff for the full amount, with costs, for the fitting up of the office, but disallowed the items for the repairs to the two houses, as, he said, although the work was undoubtedly done by the plaintiff in the defendant's time, there was no proof but that the orders might not have been given a long time previously. As regards the charge of one guinea for estimating, &c., his Honour ruled that where an estimate and specification were supplied, and no opportunity given to compete or carry out the work, the builder was fairly entitled to be paid.

The case is of some importance to builders, as showing they should be careful to ascertain if they are really receiving their orders from auctioneers or those who may shield themselves as clerks, as well as a caution to builders in supplying auctioneers or house agents with specifications and estimates, in order that they may obtain prices from others, without the trouble of employing a professional man.

SURVEYOR.

"GRINDING" TIME.

SIR,—In your paper we notice a statement to the effect that "last week" our men left work until the two hours' grinding time was conceded. We beg to say that in "February" last we came to an arrangement with our joiners (who did not strike, although they threatened to do so) that we would allow the "two hours" until the question had been finally settled between the Masters' Association and the men.

MANLEY & ROGERS.

LONDON SCHOOL BOARD.

TENDERS for the erection of a school, to provide accommodation for 837 children, on the site in Tennyson-road, Battersea, were recently received. The following were the respective amounts:—

Ennor	£7,354 0 0
Scrivener & White	7,287 0 0
Brass	7,248 0 0
Downs & Co.	7,230 0 0
Hill, Higgs, & Hill	7,032 0 0
Nightingale	6,983 0 0
Perry & Co.	6,956 0 0
Cooper	6,696 0 0

The lowest tender, that of Mr. J. Cooper, of 221, Camberwell-road, S.E., amounting to 6,696*l.*, was accepted. Cost of site, 2,120*l.*; cost of building per head, 8*l.*

For the erection of a caretaker's house, Saunders-road, Notting-hill, the amounts were:—

Chamberlin, Bros.	£442 0 0
Cowland	358 0 0
Hook & Oldrey	320 0 0
Mark	319 0 0

The lowest tender, that of Mr. F. Mark, of 51, Bell-street, Edgware-road, N.W., amounting to 319*l.*, was accepted.

SCHOOL BOARD SCHOOLS.

Willaston (*Cheshire*).—The new school, situated on the road leading from Crewe to Nantwich, has been opened. It is in the Gothic style, built of the local red bricks with blue brick dressings, and has a steep roof, supported in the interior by exposed deal timbers, stained and varnished. The exterior is diversified with gables and overhanging eaves, and the roof is laid in alternate bands of red and blue tiles. In the centre rises a bell-tower. The main schoolroom is of the T shape, and is 42 ft. long by 20 ft. broad, the length of the upper part of the T being 40 ft. 6 in., and its breadth 18 ft. From this room a classroom projects to the front, forming one of the gables of the building. Next to this is the entrance for the children, which is arched over so as to form a protection in case of rain. Two lavatories are attached to the back, and there are separate playgrounds for the boys and girls. The walls are 14 in. thick. The infant school, which is 26 ft. long by 20 ft. broad, is at the end of the building nearest Nantwich, and does not communicate with the other school. A classroom leads out of this room, and a separate lavatory is provided. The closets are upon the dry-earth system. Close to the school stands the master's house (in course of erection), which includes a room for meetings of the Board. The work has been carried out by Mr. Ellson, builder, of Hough; Mr. Bower was the architect. The outlay for the schools, which will accommodate 274 children, has been 2,000*l.*

CHURCH BUILDING NEWS.

Billingsley.—This church, having undergone restoration, has been reopened. It is built of stone from Higley, and is entirely new, except part of the west end, which has been repaired with new stones. A new tracery window has been put in, the gable end having new stone coping, with moulded corbels and bond stones. On this gable, supported with new pillars inside the church, is a turret, of stone, containing the two old bells. In taking down the south wall an old Norman doorway was discovered. The stone jambs have been repaired, and the caps and moulded arches cleaned, reset, and pointed. The chancel-ceiling is bordered to the under side of the rafters with moulded ribs, forming panels. The nave roof is open, and plastered between the rafters, the oak principals and purlins being reduced in size. The old carved oak porch, now fixed on a new stone base, has been cleaned, oiled, and varnished. The seats are of pitch-pine, varnished. The windows have been glazed by Mr. John Davies, of Shrewsbury. The staining and varnishing have been done by Messrs. Crump & Son, Bridgnorth. The chancel floor is paved with encaustic tiles by Messrs. Thorne. The hauling has been done by the tenant farmers. The work has been carried out by Messrs. Nevett, Bros., builders, Ironbridge, under the superintendence of Mr. William Nevett. Mr. Robert Griffiths, of Stafford, was the architect.

Coldham (*Isle of Ely*).—The chief stone of the new church for the district of Coldham has been laid, the edifice being dedicated to St. Ethelbreda. The dimensions are: nave, 24 ft. by 48 ft.; chancel, 17 ft. by 24 ft. The church will be faced with Elton stone, with Bath-stone dressing, and there will be a bell-turret at the west end for two bells. The roofs are to be constructed of open timber, stained and varnished, and plastered between the rafters. The vestry will be on the north side of the porch. The church will hold about 170 persons. Mr. W. Smith is the architect.

Climping (*Sussex*).—The parish church has been restored and reopened. It consists of nave, chancel, with south transepts, south aisle, and tower at the end of the south transept. The tower is said to have been added to a smaller church in the twelfth century. The restoration included the rebuilding of the west end and upper part of the tower, the stripping and repair of the roof with boarding instead of plaster; the renovation of the old oak seating, the formation of a vestry, and general repairs to the walls and floors. The windows are lancet throughout. The tower possesses an enriched doorway, and windows in the buttresses. The architect is Mr. Gordon M. Hills; and the contractor, Mr. Bushby, of Littlehampton. The cost has been 2,200*l.*

Clacton-on-Sea.—The new St. Paul's Church here has been opened. The parish church being a mile and a half distant from this new and rising watering-place, it was only natural that as houses began to spring up, and the permanent residents to increase, an effort should be made to secure better church accommodation. The new edifice is erected on a piece of ground near the residence of Mr. Page, who gave the site; and is in the early English style, of plain design. It is constructed to accommodate 350 worshippers, and has a nave 71 ft. by 31 ft., with a square tower at the south-west angle, a semi-decagonal apse for the chancel, and a vestry on the north-east side. The walls are of cement concrete, relieved with shingle dashing externally, and no stone is used excepting in the west window, which is Early English work. The cost, inclusive of furniture, &c., amounts to about 1,000*l.* The architect was Mr. G. Gard Pye, Colchester, and Messrs. Saunders & Son, of Dedham, were the contractors.

Histon (*Cambridge*).—The re-opening of the chancel of St. Andrew's Church took place on June 23rd, after restoration. The first church was of the later Norman style. Then followed a restoration after the Early English of the thirteenth century. A second restoration followed, consisting of the entire nave and aisles, after the Perpendicular Gothic. The restoration of the south part of the transept was undertaken in 1872, by Sir Gilbert Scott, and it was carried out by Messrs. Rattee & Kett. The windows are of stained glass, executed by Messrs. Clayton & Bell. In 1873, the restoration of the north part of the transept and two aisles was commenced, Sir Gilbert Scott being still entrusted with the work. In 1874, the chancel was commenced after designs by Sir G. Scott. On removing the plaster from the walls two beautiful windows were discovered, one on each side nearest the nave; also half the priest's door was found in the north wall, showing that the eastern portion of the chancel to the extent of one bay (about 10 ft.) had been cut off, and the east wall brought in. In the end of the south wall was likewise discovered a piece of the old east window of the early dog's-tooth period. Sir Gilbert Scott thereupon resolved to restore the east wall after that style; and this old portion has been worked in, so as to form a part of the new window. In 1874, the proprietor of Madingley Hall was pulling down the gallery at Madingley, the walls of which were externally of red brick, and inside was found the clunch that had been removed from the church in 1600, with the rich moulding and colour as fresh in some parts as though the work had been executed only a short time since. This was secured, and the chancel of Histon St. Andrew is faced with the clunch which 275 years ago formed part of the church of Histon St. Etheldreda. The chancel windows, of which there are thirteen, are lancets, and are to be filled with stained glass, illustrating the Apostles' Creed. This work is being executed by Messrs. Mayer & Co., of Munich. The whole cost of the chancel will be, after the windows are completed, about 1,500*l.*

Hartford.—The Bishop of Chester has consecrated the new church of St. John the Baptist, Hartford, and the ground added to the churchyard. The style of architecture is Early Gothic. The outside walls are built of Kerridge stone, with red Eddisbury stone dressings. The interior walls are lined with Kerridge stone in thin courses, with white Kelsall stone in arches, and other dressings. The nave, piers, and

pillars to windows, &c., are redstone. The roofs are covered with brindled tiles. The church consists of nave, north and south aisles, chancel and transepts, the north transept being used as a children's chapel, and the south for an organ chamber and vestry. The foundations for a tower and spire at the west end have been laid, to be carried out hereafter. The seats are open, of pitch pine, and will accommodate 500 persons; the whole being free. There is a stained-glass window in the north transept, the gift of Mr. Knowles, in memory of his son, Captain Knowles, of the ill-fated *Northfleet*, run down by the *Murillo*, off Dungeness, in January, 1873. The subject is "Peter walking on the sea." The window was supplied by Messrs. Lavers, Barraud, & Westlake, of London. The other windows are glazed with cathedral glass. The carving was executed by Messrs. Williams & Millson, of Manchester. The cost has been over 4,000*l*. The works have been carried out by Mr. R. Beckett, of Hartford, from the designs of Mr. Douglas, architect, of Chester; Mr. Walter Edwards, of Chester, having been the clerk of the works.

THE PLANS FOR THE NEW COUNTY HOSPITAL, LINCOLN.

AT the meeting of the governors last week, Mr. R. Hall read the report of the Plans Committee, which stated that seven sets of plans had been received, and after careful examination they had arrived at the decision "that the plan signed 'Experience' in red, not only combined a larger number of advantages than any other, but was in itself a very excellent design, capable, with certain modifications, of fulfilling every requirement, and placing the county in possession of one of the best hospitals of the time." It was then resolved that the plan be submitted to a professional adviser, who with the architect, and any governors who may have any suggestions to offer, shall consider the same with a view to its final adoption. After further discussion, the envelope accompanying the plans selected, and marked "Experience" in red, was then opened, and it was found that the architect was Mr. Alex. Graham, of Carlton Chambers, London.

TESTIMONIAL TO MR. AND MRS. S. C. HALL.

ON the 14th inst., under the presidency of the Earl of Shaftesbury, and at the house of Mr. Griffin, Kensington-palace-gardens, Mr. and Mrs. S. C. Hall were presented with a testimonial in commemoration of their "golden wedding," and also in recognition of their eminent services to literature and art. A large number of their friends were present. Lord Shaftesbury took the chair shortly before five o'clock, and Mr. Godwin, as one of the executive committee, explained the inception and nature of the testimonial. The fifty years of married life of Mr. and Mrs. S. C. Hall having been completed in September in last year, it was thought that the event should be marked by some testimonial of esteem on the part of friends and of appreciation by the general public. The result of an appeal from a committee thereupon formed was the inflow of a sum of 1,530*l*., from 580 subscribers, and it was determined that a portion of the money should be invested in the purchase of a joint annuity of 100*l*. per annum, and the balance (some 400*l*.) handed over to Mr. and Mrs. S. C. Hall. Mr. B. Halswell, as hon. secretary, had taken an energetic part in the carrying out of the scheme, and Mr. Griffin had acted as treasurer. Mr. Godwin especially associated in the graceful work Miss Aikin Kortright, Mrs. Griffin, and Mrs. Martin. The Earl of Shaftesbury, in the course of a very apposite address, thanked Mr. Hall for the bold and manly line he had taken in all departments of literature, and more especially for the sagacity he had brought to bear in the discovery of fraud in works of art and taste; he congratulated him, moreover, on being linked with a woman of refined delicacy and taste, who had herself given to the world a series of publications tending to instruct and elevate the human race. The Earl concluded, amidst loud applause, by making the formal presentation of the testimonial. It may be added, that the committee had had bound up in an illuminated album a great number of letters from distinguished persons. One of these letters was signed by seventeen or eighteen persons in the Salt Lake State. Mr. S. C. Hall (whose wife, by his side, was visibly affected) made a touching reply, remarking that Mrs. Hall's contributions to literature would fill 200 volumes, but all this work had not caused her to neglect the domestic duties. After alluding, with allowable pride, to the projection of the *Art Journal* thirty-six years ago, he said that the guiding principle of his wife and himself had been that there was no happiness to be obtained from that which did not make others happy.

ACTION AGAINST A HALIFAX CONCRETE BUILDER.

ON the 7th inst., at the Barnsley County Court, the adjourned hearing of the case of Froggart *v.* Firth was again gone into before a jury. Mr. Atkinson, barrister, appeared for the plaintiff, and Mr. Barker, barrister, for the defendant. The plaintiff is a miner, living at Higham, near Barnsley, and the defendant is a builder at Halifax. The action was brought to recover 50*l*. damages, sustained in consequence of two houses, built of concrete, falling in before completed. The case for the plaintiff was that the building fell owing to the defendant using a quantity of unburnt shale and clay, contrary to the contract, and against the protest of the plaintiff and his architect. For the defence, several witness were called to show that ashes were substituted for clay, which would not burn, and without the consent of the plaintiff. Mr. Briggs, builder, of Halifax, and Mr. Brock, of Huddersfield, swore that the buildings fell owing to the inner walls being too thin, and the windows too large. After a hearing occupying some hours, the jury retired, and after being absent for some time, returned a verdict for the plaintiff for the amount claimed.

CHARGE AGAINST A SEWER CONTRACTOR.

SIR,—My attention having been directed to a statement in the last number of the *Builder* referring to a charge of fraud against a "sewer contractor," allow me to say that, while the particulars therein are generally correct, I must beg to be allowed to set you right in regard to the statement of my having contracted to do the work under a schedule of prices, such not being the case, neither was I bound to price. I may also be allowed to correct the judgment of the "one member of the vestry," who thought it strange that I had not noticed the number of bricks used by Mr. Potter, inasmuch as the work not being quite complete I had no opportunity of knowing. Allow me further to inform you that the whole matter is in course of investigation. I shall be obliged by your suspending your further judgment until the result is known.

J. J. GRIFFITHS.

STAINED GLASS.

Thirsk.—A new stained-glass window is about to be placed in the north aisle of the parish church, through the liberality of Major and Mrs. Sanders, in memory of Mrs. Sanders's brothers, one of whom was formerly the member for the borough and the lord of the manor. Mrs. Macbean has also promised to place a memorial stained-glass window at the west end, in remembrance of her late son, Mr. Frederick Bell, of the Hall, who died in January last.

Leicester.—Messrs. Wailes & Son have inserted in the west end of the south aisle of the parish church a stained-glass window, in memory of the late Miss Latham. It consists of four cartoons founded upon Numbers xx. In the left-hand light the people are murmuring at the lack of water; in the second, Moses and Aaron interceding; in the third, Moses is striking the rock. In the right-hand light, the people are drinking. Beneath are portions of Scripture, and the inscription. The tracery has three groups of flowers upon enamelled glass, copied from water-colour paintings by the deceased.

Melton Mowbray.—A memorial window has just been placed in the parish church by Messrs. Wailes & Co., in memory of the late Mr. Greasley. It is at the south entrance of the church, and has been principally subscribed for by former scholars in the church school.

Arbroath.—Two memorial windows, in stained glass, have been erected in Ladyloan, *quoad sacra* Parish Church; one on either side of the pulpit,—in the north wall of the church. They are about 15 ft. high by 5 ft. wide. One contains illustrations of Moses delivering the Law upon Mount Sinai. At the bottom of this window is the inscription,—"In memory of David Lonson, of Springfield, Town Clerk of Arbroath, 1812-1858." The window on the other side of the pulpit corresponds in its style of art, and is "In memory of Hugh MacDougall, minister of the parish of Killin, 1795-1827." The windows have been erected by Messrs. Ballantine & Son, of Edinburgh.

Widdrington.—A stained-glass memorial window, of three lights and tracery, has been erected in Widdrington Church, to the memory of the Rev. Simpson Brown Maughan, late vicar of that parish. The subjects are:—"Christ's Charge to St. Peter," "The Apostles preaching on the Day of Pentecost," and "The Baptism of the Centurion." The stained glass is from the works of Mr. Baguley.

St. Mary-le-Tower.—Recently a new stained-glass window, the work of Messrs. Clayton & Bell, Regent-street, London, and representing the Conversion of St. Paul, has been placed in the south side of this church. The following inscription is at the foot:—In piam memoriam Dei beneficiorum vidua cum liberis suis hanc fenestram decavit."

DISSENTING CHURCH-BUILDING NEWS.

Hatton.—The foundation-stones of the new Wesleyan Chapel and School at Hatton have been laid. The old chapel was erected in the year 1814, but the lease having expired, and the building becoming too small for the requirements of the village, it was decided to erect a larger one on a more convenient site. The chapel will be in the Gothic style and the school-room attached to it will be so built that it can be thrown open to the chapel in case of necessity. There will also be a vestry. The chapel will accommodate 120 persons and the school-room 80. The cost is estimated at about 800*l*. The architects are Messrs. Pierpoint, Hughes, & Pierpoint, of Bold-street, Warrington; and Mr. Fairhurst, of Whitley, is the builder.

Roade.—The memorial stones of a new Wesleyan Chapel in this village have been formally laid. For some time past the want of a larger place of worship has been felt by this denomination, the present erection being far from adequate. A site was therefore selected at the upper end of the village, and purchased at the cost of 60*l*. The chapel will be a simple brick structure, with an open timber roof. It will seat 170 persons, and will have a vestry or class-room at the end. The design is by Mr. S. J. Newman, architect, of Northampton, and is being carried out by Mr. Gooderidge, of Roade. The entire cost is calculated at about 460*l*.

Falmouth.—The Baptist congregation of Falmouth has outgrown its accommodation. The little chapel in Webber-street being inadequate to accommodate the people who repair to it, the foundation-stone of a new edifice was laid on the 10th inst. The building will be erected in Market-street, and will accommodate 900 persons. It will be in the Gothic style of architecture, and will be built of local stone, with granite and Bath stone dressings. The outlay is calculated at 5,000*l*. Mr. J. Hicks, of Redruth, is the architect; and the builder is Mr. W. Leggey, of Falmouth.

Smethwick.—The new Presbyterian Church, erected at the Six Ways, Smethwick, has been opened. It is in the Byzantine style of architecture, has cost about 1,700*l*., and is built to accommodate 400 persons. Mr. Tait, of Leicester, was the architect, who gave his services gratuitously.

Caersws.—The new Wesleyan Chapel here has been opened. It is in the Gothic style, and will comfortably seat 150 people. It is built in the form of a parallelogram, with a schoolroom and vestry at the north end. The foundation walls are of Penstrowed stone, with a moulded plinth, and the remainder of the walls with red brick, externally faced with the red pressed brick, and with bands of freestone and coloured brick. Over the porch is a large rose-window, which has, with the window at the other end, been filled with stained glass by Mr. John Davies, of Shrewsbury. In the sides are lancet windows. The roof is partly open, with circular ornamental flowers around ventilators, cornice around ceiling, and label mould over windows. The internal fittings are of pitch pine, stained and varnished. The seats are free. The cost was 270*l*., the land having been given by Lord Sudeley. Mr. E. Jones, of Newtown, is the architect; and Mr. J. Evans, Caersws, the builder.

Windsor.—A site has been secured for the new Wesleyan Chapel, on the Vansittart estate, at the corner of the Alma and New roads, at previously mentioned, the frontage being 120 ft.

on the New-road, and 140 ft. on the Alma-road. The building will be in the Gothic style of architecture, and the cost, including the purchase of land, will be 7,000*l.*, and provision will be made to accommodate 650 people. The chapel will consist of nave and side aisles. At the back of the chapel will be a building having externally the appearance of a transept to the chapel, to be used for Sunday schools and other purposes. The nave will be about 70 ft. long and 40 ft. high. The aisles will be separated from the nave by a series of five arches, supported by light pillars. The width of the interior will be 44 ft. There will be a gallery on three sides of the building. The chapel will be lighted from upper and lower windows on the side walls, and a large window in front of the building. There will be a spirelet, 90 ft. from the ground, surmounted by a weathercock, it being intended at some future time to replace this by a spire, at an additional cost of about 2,000*l.* The building adjoining the chapel will consist of two floors. On the ground-floor will be two passages leading into the chapel, making three divisions. Two of these will be used for Sunday school, and the other will be further subdivided into two class-rooms and minister's vestry. The upper floor will be one large room, to be used for meetings in connexion with the Wesleyan body. There will be lights in the gable ends, and also on the side facing St. Mark's School. The ground size of this room will be 60 ft. by 28 ft. The building will be of Wycombe stone, faced with Bath stone. Mr. Joseph Morris, of Reading, is the architect.

Miscellanea.

Roman Altar found near the Tyne Bridge.—At a meeting of the Newcastle Society of Antiquaries last week, the Rev. Dr. Bruce stated that a fine altar to Neptune had been found in the river near the new Tyne Bridge. It had been broken in three parts, but each part had been brought up by the dredger. It was peculiar in its appearance; on the capital they had the dedication to Neptune, by the Sixth Legion, "Neptuno, Legio Sexta victrix pia fidelis"; and the face of the altar was occupied by a trident, on the handle of which was a spirited and extremely handsome representation of a dolphin. The altar was unlike anything he had ever seen. Only two other traces of the god Neptune had been found in the North of England. One of these was a figure of Neptune found at Carrawburgh; and the other was a small altar inscribed "Neptuno Sarabo Sino," found at Chesterholm. The present altar was a much finer piece of sculpture than either of these. He did not know that there was another altar to Neptune found on the whole line of the wall; but the one coming from Pons Elii was exceedingly inter ing. It was a pity that instead of the name of the Sixth Legion, whose head quarters were at York, the altar had not contained the name of the cohort located in the Roman garrison of Newcastle. The first cohort of the Cornevii is stated to have had their head quarters at Pons Elii, but no inscriptions have been found stating the fact. The altar would have been very precious if it had given the name of the cohort which was located in this garrison.

Material for Building.—A material suitable for blocks and bricks is, according to the invention of Messrs. Smith & Paterson, of Glasgow, made from two mixtures. The first contains coal tar, mixed with small broken stones or shingle, a portion of which should be pulverised or mixed with sand, so that the interstices between the stones of larger size may be properly filled up. The second mixture is composed of clay and pitch; sand or chalk may be substituted for the clay. The first mixture is mixed in a mixing apparatus at a heat which is gradually increased until the product is adhesive to the touch. The second mixture is formed by grinding the powder thus obtained, and is added to the first mixture while its particles are adhesive to the touch. The mixture of the two compounds is confined in a close vessel and heated so as to diffuse the vapours uniformly throughout the ingredients. In manufacturing a building block, the material, having been tested, is removed while hot to moulds, and pressed and shaped as required.

The Assistant Surveyor of Bermondsey. At the vestry meeting last week it was resolved, on the motion of Mr. Priter, that the salary of Mr. Ford, the assistant surveyor, should be increased 50*l.* per annum.

Bad Payments of the Leicester School Board.—At the meeting of the Leicester School Board, on the 6th inst., a letter was read from Messrs. Sawbridge & Tate, whose contract had been accepted under certain provisions at the last meeting of the Board, declining to undertake the responsibility of carrying out the work of erecting the Kent-street Schools, but stating that they were willing to do the carpenter's work. A letter was also read from Mr. John Loveday, of Kibworth, stating that he had heard such a bad character of the School Board, for payment on certificate, &c., that he would decline carrying out his tender, unless some alterations were made. In reference to this matter the clerk said that Mr. Loveday had called upon him, and he had expressed his willingness to carry on the work if the Board would advance 500*l.* on his tender, and order payment for the work within a week after the production of the architect's certificate. The following resolution was passed:—"That fresh tenders for the erection of Kent-street School be invited, and that arrangements be made for paying the instalments due to contractors on production of the architect's certificate (instead of making them wait for the receipt of the money from the Public Works Loan Commissioners), and that in case any persons desire to Tender for a portion of the work they be permitted to do so."

The Buyer of Sir Morton Peto's House. According to the London correspondent of the *Dundee Advertiser*, at the West End of London there is much talk respecting the personal extravagance of some of the persons,—especially of one or two originally coming from Scotland,—who have recently had to "succumb." Mr. Collie, who has not only come to grief himself, but brought so many others to grief along with him, began life in a comparatively humble sphere, but after making what was considered a lucky stroke by blockade-running, he established himself as a City magnate, and purchased the house formerly occupied by Sir Morton Peto, in Kensington Palace-gardens, for 30,000*l.* Sir Morton's crib being altogether too diminutive for Mr. Collie, and scarcely sufficient for the accommodation of his servants, he pulled it down, and built a palace which is one of the grandest, if not the grandest, in the Gardens. He is said to have spent about 30,000*l.* on his picture-gallery, which contains some fine specimens of the work John Phillip.

The Labour Laws and the Trade-Unions Committee.—At a special meeting of the Trade Unions Congress Parliamentary Committee held on Wednesday, Mr. Odger in the chair, a long discussion took place, resulting in the unanimous adoption of the following resolution:—"That this committee approve the clause of the Home Secretary, which he proposed on Monday night, dealing with the Criminal Law Amendment Act, 1871, as a first step towards the full settlement of the agitation on the labour laws as criminally applied; and believe that with a few verbal amendments, such as making the first part of the clause cover the latter portion, as well as the transposition of words so as to make the clause definite and unmistakable in carrying out the intentions of the Home Secretary's speech, the measure will be such as to give satisfaction to large classes of working men all over the country." The above resolution was ordered to be forwarded to Mr. Cross.

Worcester City and County Fine Arts Association.—The fourth exhibition of the Worcester City and County Fine Arts Association was opened in the Music-hall on Monday by the Mayor (Mr. J. Longmore), in the absence of the Earl of Dudley, the president. The Mayor, in opening the proceedings, said the beauties that were around them he was sure they would all appreciate, and he believed the public at large when they came to see them would be delighted with the collection, and those persons who could not appreciate such a collection must be akin to those persons who travel from Dan to Beersheba and say "all is barren." One feature in the doings of the association was the privilege that they gave at the close of the exhibition to the working men of the city to see those beautiful specimens at a nominal sum. It must have a beneficial and enlightening influence upon their minds, and give them a taste and love of the beautiful, and so must be calculated to do infinite good.

New Proprietary Schools at Cardiff.—The memorial stone of large proprietary schools at Cardiff has been laid by Lord Aberdare.

The New Bank Premises at Peterborough.—The Stamford, Spalding Boston, and Peterborough Bank, in Church-street, in this city, is near completion. It is a two-story building, of Ancaster stone front and return angle. The bank-room, one large compartment, 35 ft. 6 in. deep by 27 ft. 6 in. wide, is approached through a spacious doorway, the jambs being moulded and polished red granite, with mahogany swing-doors at the entrance. The floor consists of encaustic tiles in front of the counter. The building is warmed by hot-water pipes. The manager's room, 15 ft. high, 25 ft. by 15 ft., faces the street. The waiting and book rooms, not omitting the strong-room, which is inclosed with strong walls, and arched with brick and fire-brick, with the lavatories and retiring-places for clerks, are placed at the back. Mr. Nightingale, of the Albert Works, London, is the contractor; the architect being Mr. Eve, of London. The clerk of the works is Mr. Jno. Duncan. The carving is from the hands of Mr. Matthews, of Grantham.

The Proposed Market Hall, Pickering.—On the 7th inst. at a public meeting the committee presented their report, to the effect that all the sites in or near the market-place were too expensive, the cheapest being 1,500*l.* Two other sites were referred to—Mr. Coward's in Park-street, and Mr. Whitelock's in Hungate. Mr. Whitelock offered two cottages and his own shop, with a frontage of 45 ft., and 90 ft. in depth, for 350*l.*, or if with right of way through the market-hall for 300*l.* After discussion it was resolved that a conditional contract be entered into with Mr. Whitelock for his property, and that a market-hall with public room over, be built on the same; that a limited liability company be formed to carry out the wishes of the meeting; and that Mr. Watson should ascertain the cost of erecting a suitable building.

St. George's Hall, Langham-place.—The new first part, *Eyes and no Eyes*, written by Mr W. S. Gilbert, and set to music by Mr. German Reed, is very lively, harmonious, and entertaining. Mrs. German Reed, Mr. Corney Grain, Mr. Alfred Reed, Mr. H. Bishop, Miss Fanny Holland, and Miss Leonora Braham are all provided with characters well suited to their respective abilities, and their acting and singing are excellent. Miss Holland has a capital song in it, "As I was going along the Road"; and Mrs. Reed declaims delightfully in mock heroics, "Yes, yes, I am that Miserable Beauty." Mr. Gordon has painted a more important scene for it than usual,—a Burgundian Gothic Residence,—and the too little affair is altogether a success.

Archæological.—As the Duc de Gramont, French Minister of War, director of the Furness Steel Company, was on the 7th inst. with other directors inspecting the works, he visited some remains just unearthed by workmen in shifting limestone from Goldmire Cliffs. The party suddenly found red freestone masonry, forming a hollow, 9 ft. in diameter and 5 ft. high, containing human and animal bones. Five feet of soil, growing nut-trees, and an elm 30 ft. high, covered the masonry. A skeleton with a sword was found some months prior. The bottom of the hollow being covered with burnt lime, it is conjectured that this is the ancient kiln used by the monks of the building of Furness Abbey 700 years ago.

Edinburgh Museum of Science and Art.—The library of this museum has just been enriched by a large donation of books most liberally presented by the French Government. The whole of the patent specifications from 1850 to the present year, in ninety small but thick quarto volumes, containing some thousands of illustrations, with thirty-seven volumes of catalogues or indices to the same, constitute the bulk of the donation; but, in addition, there are twelve other most valuable works in twenty-two volumes relating to art and to the archæology of Paris, &c., all of which are from the Government printing establishment of France.

Opening of the New School, Northleach. On the 29th ult. the new National school was formally opened by the Rev. W. R. Lawrence, the vicar. Some 215 day and Sunday scholars assembled in the new building, which consists of principal room, 50 ft. by 18 ft.; class-room, 19 ft. by 16 ft.; porches, &c., and master's residence. It stands on a site of 1 acre (near the old school), given by Lord Sherborne. Mr. Knight, of Cheltenham, was the architect, and Mr. Knibbs, the builder.

Artisans' Dwellings.—We are authorised by the Executive Council of the Metropolitan Artisans' and Labourers' Dwellings Association, Limited, the programme of which appears in our advertisement columns, to state that her Majesty the Queen, whose earnest desire to promote the well-being of her people, and especially of that class who are most in need of judicious help, is so well known and appreciated, has been graciously pleased to express her approval of the philanthropic objects which the Association has mainly in view, and her best wishes for their successful accomplishment. We will refer to the programme another time.

Building in Fiji.—The 6th Company of Royal Engineers, under the command of Lieut.-Colonel F. E. Pratt, from the Chatham School of Military Engineering, have embarked on board the chartered screw steamer *Whampoa*, for conveyance to the Fiji Islands. The Royal Engineers are to be employed at Fiji in the erection of a residence for the Governor, and on other public buildings and works to be undertaken. In the same vessel Mr. James Hill, of Upper Thames-street, shipped a large quantity of his locks and door furniture, and general ironmongery, for the Governor's house, ordered by the Royal Engineer Department.

Hospital for Infectious Diseases at Warrington.—Plans for a new hospital for the treatment of infectious diseases in Warrington have been drawn by Mr. Vawser, the borough engineer, passed by Mr. Simon, the medical officer of the Local Government Board, and returned to the Mayor of Warrington fully approved. The proposed institution will have forty beds, medical and nurse accommodation, a porter's lodge, a mortuary, provision for a sick carriage. A new infirmary and dispensary for accidents and ordinary cases of sickness will soon be finished. It has been endowed with 10,000*l.*, through the munificence of one gentleman.

Wednesfield School Board.—At the last meeting of this Board, Mr. Lello, pursuant to notice, proposed the appointment of an architect, which was unanimously agreed to. The clerk said he had received letters applying for the office from the following gentlemen:—Messrs. Bidlake & Fleeming, Waterloo-road; Weller & Proud, King-street, and Mr. W. D. Griffin, Darlington-street, Wolverhampton; Messrs. Wilson, Son, & Aldwinkle, London; and Mr. E. H. L. Barker, of Hereford. Mr. Lello proposed the appointment of Mr. Griffin. This was seconded by Mr. Atkins and carried.

New Almshouses at Gerrard's-cross.—About twelve months ago a block of ten almshouses was commenced at Gerrard's-cross, being intended by Sir J. Wallis Alexander, bart., as a memorial to his brother, the late Sir William Alexander, bart. The buildings are now complete, and ready for occupation. The facings are of red brick, and the openings to the windows and doorways are of stonework, the chimney shafts of moulded bricks, and the roofing covered with Broseley tiles, the barge-boards having tracery and carved work. The cost has been about 4,000*l.*

Parsonage for Hammerwood.—In 1873 a school chapel was opened by the bishop of the diocese at Hammerwood, which had been erected by Mr. Oswald Augustus Smith, for the accommodation of that gentleman's tenants, their families and the surrounding inhabitants. There being no residence for a clergyman, Mr. Oswald Smith has lately given instructions to Messrs. Charlwood Brothers, builders, of East Grinstead, to erect a parsonage, at a cost of something over 2,000*l.*, from the designs of Mr. George Williams, architect, of London. It will be in the Elizabethan timbered style.

Egyptian Progress.—The Government of the Khedive gives constant proofs of its determination to march with the spirit and progress of the age. The last instance it furnishes of its resolution in this respect is reported in a letter from Alexandria announcing that from the 1st of September next the Gregorian calendar is to be adopted officially in Egypt, and the Christian era will take the place of that of the Hegira. The Khedive has just issued a decree to that effect.

Foreman's Cottage and Offices, Lincoln Gasworks.—At a meeting of the Lincoln Gaslight and Coke Company, last week, the tender of Mr. S. Sherwin, of Boston, for the erection of foreman's cottage, offices, &c., for the new gasworks, at Bracebridge, was accepted.

Monumental Cross, Horncastle.—The Monument recently erected in Holy Trinity churchyard, to the memory of the late vicar, is in the form of the old churchyard cross, and is altogether 16 ft. in height. At the basement, upon the second step, is the following inscription:—"To the glory of God, and in memory of Robert Giles, Prebendary of the Cathedral Church of Lincoln, and vicar of the parish of Horncastle. Died July 12th, 1872." Messrs. Walter & Hensman, have erected it under the superintendence of Mr. James Fowler, Louth, architect.

Newchurch, Isle of Wight, School Board. At a meeting of the Board, on Friday last, with Mr. Trimen, architect, tenders were received for erecting Board schools at Newchurch, as follows:—

J. Newnham, Ventnor	£1,772	0	0
H. W. Hades, Newchurch	1,678	0	0
W. Jolliffe, Sandown	1,600	0	0
F. Colenutt, Sandown	1,429	0	0
H. Sanders, Shanklin	1,323	0	0
A. & A. Newnham, Shanklin	1,320	0	0

Mr. Sanders's tender, 1,323*l.*, was accepted.

The Repairs of St. Bride's Church, Fleet-street.—The committee appointed to inquire into the state and condition of the church, and the necessary repairs required thereto, brought up a report, on the 8th inst., recommending that the church be painted, the pews, gallery front, chancel, and tablets cleansed, the cushions repaired, certain pews altered, and the organ regilded, tuned, and cleaned, besides other small matters. The approximate cost was estimated at between 1,800*l.* and 2,000*l.* There was sufficient money in hand. The report was adopted.

Sale of St. George's Hall, West Bromwich.—That dingy-looking structure, called by courtesy St. George's Hall, and situated in West Bromwich, has been sold for 900*l.* To those who have had the pain of attending meetings in a building which was splendidly ill-adapted for the purposes for which it was designed, this will be gratifying news. The inhabitants, in a few weeks, will have the comfort of meeting in a hall which does not outrage the title.

A Garden for High Wycombe.—Mr. J. O. Griffits, Q.C., one of the recently *Gazetted* batch of "her Majesty's counsel learned in the law," announces that he "has decided to signalise his preferment in the profession." This Mr. Griffits intends to do by purchasing the Frogmore Gardens, at High Wycombe (his native town), and laying them out as a public pleasure-ground, and to maintain the gardens for three years, after which they are to be supported out of the Wycombe rates.

Stonehenge.—Last week a party of civil engineers proceeded to this spot, and were engaged for four or five days in taking most elaborate measurements of the structure, as well as making astronomical calculations. The results of their exhaustive survey have been very striking, astonishing, it is said, none more than the *savants* themselves, and leave not the least doubt about the solar references of the structure; and, further, that it was undoubtedly erected as a temple of the sun!

Tenders for Corn Store, Rochester.—The following tenders were received for erecting a corn-store in the Canal-road, Strood, for Mr. George Youngman. Mr. M. Bulmer is the architect, and the lowest tender has been accepted:—

Naylar	£2,500	0	0
Ball	2,430	0	0
Pankhurst & Son	2,177	0	0
Calluud	2,150	0	0

Northumberland Assize Court.—At the Quarter Sessions for the county of Northumberland, held at Hexham on the 30th ult., the plans of the proposed improvements to the "Moot Hall Courts," Newcastle-on-Tyne, prepared by Mr. William Crozier, county engineer and architect, for the county of Durham (who carried out similar improvements at the Durham Assize Courts), were approved. The estimated cost of the alterations is 6,000*l.*

Rural Sanitary Authorities and Builders. The builders of the North of England are complaining of the great inconvenience and hindrance to work by the long delay in passing of plans at the rural sanitary meetings; in many instances plans being kept over two months before a decision is arrived at. Several contractors who commenced work have been summoned, and the buildings ordered to be pulled down again.

Widening of Fleet-lane.—A memorial from certain inhabitants of the Ward of Farringdon Without and neighbourhood was presented to the Commissioners of Sewers last week, praying them to widen Fleet-lane on account of the heavy traffic which passes through. A deputation attended to support the prayer of the memorial, which was, after a short discussion, referred to a committee for consideration and report.

A Floating Swimming Bath.—The first of a set of floating swimming-baths was opened on the 6th inst., on the Thames, near the underground railway station at Charing-cross. It is 185 ft. long by 25 ft. wide, and the interior is neatly fitted up. The depth ranges from 3 ft. to 7 ft., and it is so constructed that there is a continual supply of filtered water, which runs in through the filters at the rate of 500 gallons per minute.

The Restoration of Knook Church.—The dilapidated old church at Knook, near Heytesbury, Wilts, is about to be thoroughly restored, externally and internally, and a new vestry-room built on the north side of the chancel. It is also to be repaved and reseated, and a new pulpit, communion-table, and heating apparatus provided. The estimated cost of the work is 750*l.*, towards which Lord Heytesbury has contributed 600*l.*

New Pavilion for the Newton-le-Willows Cricket and Bowling Club.—During the present season a new pavilion, costing 200*l.*, will be erected on the ground of this club. The wicket is well known as one of the best in England, and additional accommodation to the visitors belonging to the first-class clubs who frequent the ground has long been wanted. The building has been designed by Mr. R. Brierley.

Hailsham Church.—The restoration of the old church of St. Mary, Hailsham, proceeds but slowly, owing to a lack of the necessary funds. The working committee appointed some time since have, however, raised enough money to restore the south aisle according to the design of Mr. H. E. Rumble, Eastbourne, and these have been carried out by Mr. J. Thompson, of the same town.

Discovery of an Ancient Cave.—Workmen engaged in re-opening quarries at Ross of Mull to get material to restore the ancient monuments on the Island of Iona have come upon a large cave, called the Unns Cave, on the walls of which are sketched designs of the crosses and other architectural ornaments with which the island abounds. The date of the erection of the monuments and tombstones is also given. The cave is said to be 80 ft. long.

Bursting of a Dam.—Last week the dam of a large pool on Lord Dartmouth's estate, Patshull, near Wolverhampton, burst, owing to the late heavy rains. A large volume of water ran over various parts of the estate, carrying away a strong brick wall and fencing, distributing tons of fish, and inundating extensive game preserves, coppices, and woods. Fortunately the park, well stocked with deer, escaped.

A New Chapel at Bedminster.—The foundation-stone of a new chapel and school-room, in connexion with the United Methodist Free Churches, at Ashton-gate, Bedminster, was laid on Monday, estimated to cost some 700*l.* of which 250*l.* have been subscribed. The new building will accommodate about 700, and will be, when completed, 32 ft. by 47 ft. The builder is Mr. Isaac Bennett, and the edifice is a plain and substantial erection of the Italian type.

"Damage to the Parthenon."—With reference to a paragraph quoted in our last under this heading, a correspondent writes,—"One can scarcely conceive the possibility of this getting into the *Athenæum*; but, for pity's sake, how got it into the *Builder*?" Simply because the statements are so remarkable that we shall be glad to have them contradicted or otherwise by those who know.

The Ryde Town Council.—We have received a letter from Alderman Dashwood, of Ryde, in reply to one signed "An Admirer of the *Builder*," but as we have already published a long communication from the Town Surveyor to the same effect, and as, moreover, the Alderman's letter would render us liable to an action for libel, we do not print it.

The Park-lane Fountain, of which we gave an account some time ago, was uncovered on Friday in last week.

Fall of a Factory.—Three chambers containing sulphuric acid gave way on Monday afternoon at the chemical works of Messrs. Morris Brothers, Stonekurth, near Gainsborough. More than 100 men were employed near the spot, but at the first signal of danger they left the mill. Three, however, were seriously injured by the falling mass. The damage done will amount to several thousand pounds.

The Lowest Death-rate in England.—A remarkably low bill of mortality was presented at the last meeting of the West Bromwich Commissioners: the death-rate was only 13·4 per 1,000. This is a lower death-rate than any of the most naturally favoured places in England. "And yet some of the inhabitants are not happy!" says a local print.

A New Pier for Ryde.—A scheme is now being prepared for a new pier for Ryde. It is proposed that this shall be constructed by and belong to the town; that it be an ornamental iron structure, with promenade in the centre, and a way for carriages, carts, &c., on either side. The estimated cost is 50,000*l.*

Property in the Strand.—The freehold premises, No. 153, Strand, 18 ft. frontage, covering an area of 954 ft., and let on lease for twenty-one years, at 370*l.* per annum, were sold by auction, by Messrs. Wilkinson & Horne, and realised 7,920*l.*, being at the rate of a little over 8*l.* 6*s.* per square foot.

Price of an Island.—The Island of Lacroma, a property of the late Emperor Maximilian of Mexico, situated about a quarter of an hour from the town of Ragusa, has been put up for sale at the price of 375,000 fr. The most remarkable building in it is the convent of the Benedictines, founded in 1192 by King Richard Cœur de Lion.

The Sanitary Authorities at Tiverton have decided "that Mr Estridge be employed to make a survey and report on the water supply and drainage of the borough at a cost of 100*l.* and travelling expense."

Free Library, Stockton-on-Tees.—In the recent competition for this library fifteen designs were submitted. The plans sent in by Messrs. Garside & Johnson have been selected by the Town Council.

Institution for the Blind, Devonport.—The tender of Mr. Martin, of Stoke, for the erection of the proposed Devonport Institution for the Blind, in St. Aubyn-street, at 4,500*l.*, has been accepted.

A New Market for Leeds.—On Tuesday, the 6th inst., the Mayor of Leeds laid the foundation-stone of a new market for fish, hay, meat, vegetables, &c., to be erected at a cost of 40,000*l.*

Asylum for Lunatics at Bath.—At the Bath Town Council meeting, last week, it was resolved to purchase, for 8,100*l.*, a site on Claverton Down for an asylum for pauper lunatics.

The Working Men's Club and Institute Union.—The Earl of Rosebery will preside at the annual meeting of the members and friends of this society, on the 17th of July, at the Society of Arts.

History of Art.—We hear that Mr. John Forbes Robertson is writing for Messrs. Cassell a popular history of art for the last hundred years.

TENDERS

For new chapel, Greenwich Union. Mr. W. Wallen, architect:—

Crabb	£2,445	0	0
Staines	2,362	0	0
Wood	2,320	0	0
Allpress	2,275	0	0
Smith	2,260	0	0
Hart (accepted)	2,142	0	0

For the erection of Police offices, cells, superintendent's residence, &c., at Chesterfield. Mr. S. Rollinson, architect:—

Stevenson & Weston	£2,830	0	0
Slim	2,720	0	0
Hall	2,500	0	0
Forrest	2,424	0	0
Fidler	2,391	0	0
Rollinson (accepted)	2,366	0	0

For the erection of shop and warehouses in the Euston-road. Mr. W. Cresswell, architect. Quantities by the architect:—

Baldwin	£2,370	0	0
Dunkley	2,184	0	0
Beach	2,124	4	3
Gill	2,042	0	0
Sharman	1,885	0	0
Aitchison & Walker	1,810	0	0
Potter	1,806	0	0

For alterations to the Lord Nelson public-house, Blackfriars-road. Messrs. Ingram & Hollands, architects. Quantities supplied:—

Taylor	£777	0	0
Mills & Sons	768	0	0
Cook & Green	663	0	0
Blott	595	0	0

For alterations and repairs to Melmoth Lodge, Cookham, Berkshire. Messrs. Raynes & Shum, architects:—

Langmead & Way	£185	0	0
Silver & Son	179	0	0
Woodbridge	176	0	0

For restoration of St. George's Church, Edworth, Bedfordshire. Messrs. Raynes & Shum, architects:—

Redhouse	£740	0	0
Osborne	700	8	0

For the erection of school and residence, for the united parishes of Hinxworth and Edworth, Herts. Mr. John G. Raynes, architect:—

J. & G. M. Bates	£1,116	0	0
Bailey & Son	937	0	0
Redhouse	840	0	0

For Board schools, teacher's residence, boundary walling, &c., at Roade, Northamptonshire. Mr. T. Haygate Vernon, architect. Quantities by Mr. R. Carpenter:

Ireson	£1,790	0	0
Coaford	1,790	0	0
George	1,600	0	0
Hall	1,579	0	0
Goodridge (accepted)	1,437	0	0
Marsh*	1,280	0	0

* Preferred to take out his own quantities, but Goodridge was accepted on the surveyor's quantities.

For painting, colouring, &c., at Furnival's-inn, Holborn. Mr. Arthur Vernon, architect:—

Cook & Green	£1,070	0	0
Boden	997	0	0
Bracher	950	0	0
Peto, Brothers	880	0	0
Goodwin	787	10	0
Phillips & Sons	786	0	0
Thomas	745	0	0
Brindle (accepted)	695	0	0

For the erection of house, &c., at Hornsey, for Dr. Hall. Mr. A. G. Hennell, architect:—

Williams & Son	£4,045	0	0
Payne & Balding (accepted)	3,878	0	0

For additions to drill-hall, Bromley, Kent, for the Drill-hall and Gymnasium Company. Mr. W. Mallett, architect:—

Copping	£1,000	0	0
Taylor & Son	769	0	0
Arnaud	698	0	0
Payne & Balding	690	0	0

For building six cottages, at Bromley, Kent, for the Bromley Cottage Improvement Company. Mr. G. Truefitt, architect:—

Arnaud	£1,096	0	0
Carter	1,070	0	0
Jay	1,020	0	0
Payne & Balding (accepted)	1,000	0	0

For house at Chislehurst, Kent, for Mr. G. Crowhurst. Mr. H. F. Bacon, architect:—

Payne & Balding	£993	0	0
Hayesman & Andrews	975	0	0
Hall & Cooper	825	12	0

For additions to Shortlands House, Shortlands, Kent, for Mr. W. E. MacAndrews. Mr. Ernest George, architect:—

Arnaud	£9,673	0	0
Brass	8,450	0	0
Ashby, Bros.	8,421	0	0
Clark & Brassey	8,329	0	0
Payne & Balding	8,312	0	0
Braid, Jopling, & Co.	7,994	0	0
Manley & Rogers	7,457	0	0

For new premises, Blagrave-street, Reading, for Messrs. Blandy & Hawkins. Messrs. Brown & Albury, architects:—

Woodroffe	£1,250	0	0
East	1,139	16	0
Searle	1,125	10	0
Strong, Bros.	1,115	0	0
Filewood	1,085	0	0

For the erection of a pair of semidetached villas, in Wickham-road, New-cross, London, for Mr. George Mills. Mr. W. Seckham Witherington, architect:—

Slade	£2,120	0	0

For the erection of warehouses and stabling, in Old Bailey, London, for Messrs. Hoar & Co. Mr. W. Seckham Witherington, architect:—

Elkington	£16,500	0	0

For alterations and additions to the Salisbury Hotel, Fleet-street, for the Agricultural Hotel Company (Limited). Messrs. Giles & Gough, architect. Quantities by Mr. C. H. Goode:—

Nightingale	£4,993	0	0
Thorn & Co.	4,985	0	0
Trollope & Sons	4,973	0	0
Hill, Higgs, & Hill	4,910	0	0

For alterations and additions at the Fever and Small-pox Hospital, Homerton, for the Metropolitan Asylum District Board. Mr. E. L. Bracebridge, architect:—

Wood	£7,250	0	0
Potter	7,100	0	0
Staines & Son	6,996	0	0
Tongue	6,995	0	0
Dabbs	6,855	0	0
Parker	6,676	0	0
Wagner	6,610	0	0
Aitchison & Walker	6,114	0	0
Prout	5,940	0	0

TO CORRESPONDENTS.

F. B.—J. G. P.—J. C. H. jun.—M.—G. R. & Son.—P. & W.—M. J.—J. L.—J. H. B.—Pump.—S. R.—C. C. H.—A. & H.—W. S. O.—R. C.—R. & S.—J. W. W.—W. S. W.—B. & A.—C. H. G.—J. G.—W. M. (not adapted for printing).—M. P. (ditto).—L. H. I. (next week).—T. E (shall have attention next week).—W. H. B. W. (ditto).—S. D. (ditto).—W. (ditto).

We are compelled to decline pointing out books and giving addresses.

All statements of facts, list of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

CHARGES FOR "WANTED" ADVERTISEMENTS.

	Situations Wanted.	Situations Vacant.
Six lines (about fifty words) or under ..	2s. 6d.	4s. 6d.
Each additional line (about ten words)..	0s. 6d.	0s. 6d.

TERMS OF SUBSCRIPTION.

"THE BUILDER" is supplied, *direct* from the Office, to residents in any part of the United Kingdom at the rate of 19s. per annum, *Payable in Advance.*

Halfpenny stamps accepted for amounts under 5s. Any larger sum should be remitted by Money Order, payable at the Post Office, King-street, Covent-garden, W.C. to DOUGLAS FOURDRINIER.

Advertisements cannot be received for the current week's issue later than **THREE** o'clock p.m. *on THURSDAY.*

The Publisher cannot be responsible for TESTIMONIALS *left at the Office in reply to Advertisements, and strongly recommends that* COPIES ONLY *should be sent.*

Bath Stone of best quality.
RANDELL, SAUNDERS, & CO. (Limited),
Quarrymen and Stone Merchants.
List of Prices at the Quarries and Depôts; also cost of transit to any part of the Kingdom, on application to
Bath Stone Office, Corsham, Wilts. [ADVT.]

Patent Selenitic Cement, with double the usual sand, is much stronger than ordinary mortar. Plastering finished in much less time at less cost. Excellent substitute for Portland cement for Concrete at less than half its price.—21½, Millbank-street, S.W. [ADVT.]

Asphalte.
Seyssel, Patent Metallic Lava and White Asphaltes.
M. STODART & CO.
Office:
No. 90, Cannon-street, E.C. [ADVT.]

Whitland Abbey Green Slates.—These Quarries are now fully opened out, and are producing Slates in all sizes, and in any quantity: sound, and of choice green tint.—For samples and further particulars, apply to the MANAGER, at the Quarries, Narberth-road, R.S.O. [ADVT.]

Bills of Quantities, Specifications, &c., Lithographed by ROBT. J. COOK & HAMMOND, Broadway, Westminster, S.W., with accuracy and punctuality. Plans and Drawings Copied, Traced, or Lithographed.—[ADVT.]

The Lath and Veneer Cutting Company, Limited, desire the attention of Builders and Contractors in London and Country to the Company's MACHINE SPLIT LATHS, which are of equal size, flat, rough, and without flaw, thus ensuring great saving in Laths, Plaster, and Labour. For prices, apply to the principal Building Material Merchants, or at the Works, No. 7, Grosvenor-road, Pimlico, London.—[ADVT.]

J. L. BACON & CO.
MANUFACTURERS OF
IMPROVED HOT-WATER APPARATUS,
FOR WARMING AND VENTILATING
Private Houses, Churches, Schools, Hospitals, Manufactories, Greenhouses, &c.
OFFICES AND SHOW-ROOMS:—
No. 34, UPPER GLOUCESTER PLACE, DORSET SQUARE, LONDON, N.W.
Illustrated Pamphlet on "Heating" post free for Twelve Stamps.

MICHELMORE & REAP,
Manufacturers of
CHARLES COLLINGE'S PATENT
COLLINGE'S PATENT HINGES, LEVER, SCREW, & BARREL BOLTS,
and IMPROVED GATE FITTINGS of every Description.
Discount to Builders. Illustrated Sheet on application.
36A, BOROUGH ROAD, LONDON, S.E.